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ORIGINAL ARTICLES.

THE FUTURE OF THE COLORED RACE IN THE UNITED STATES FROM AN ETHNIC AND MEDICAL STANDPOINT.*

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Part I.

LIVING as we do practically in the "Black Belt," the future of the colored race is of vital importance to us and must interest us, especially as there has come a cry of warning from certain writers who see in the race a menace to the country in a future not far distant. Since many of the discussions of the question have shown a more or less strong political and sectional spirit let me state at the outset that I shall have nothing to do with its political or sectional bearings. If we are to get at the truth and are to solve this problem it must be from the teachings of ethnology, and biology, and the experiences of those who have studied the physical status of the race. Any political bias is apt to play sad havoc with the truth. Much that I wish to say and many details and statistics necessary to the support of my arguments have no right in a lecture of this kind, and I shall reserve them for another place. I have introduced as few figures as possible, allowing another to answer the argument from the census returns—an argument brought forward as all sufficient in the solution of the problem.

In February, 1883, there appeared in the *Popular Science Monthly*, an article by Professor E. W. Gilliam, entitled "The African in the United States." In 1884, Mr. Albion W. Tourgée, author of "A Fool's Errand," published a book entitled "An Appeal to Cæsar." These two essays treated the subject from the same standpoint. They both gave rise to much comment at the time, and with those who could see no other side to the question they appeared convincing, as both writers based their reasoning upon figures, and to many minds figures never lie, no matter how those figures may be arranged; but in problems of this kind figures may prove to be very tricky if not dangerous, and when used by those who have their preconceived opinions they may be made to prove almost anything. As a practicing physician I have had many things brought home to me which are intimately connected with the question before us, and which, I think, disprove what these writers seem to regard as almost self-evident. I have called your attention to these two essays because they contain the only arguments, if arguments they can be called, which could be brought forward to prove their side of the question. I trust that before I close I may be able to show you that there is another view to take and one more in accord with our hopes for the bright future of our country and the higher civilization of our race.

And first, what is Professor Gilliam's thesis? and what are his arguments? His thesis is, first, that the blacks are so gaining on the whites that they will eventually outnumber them; second, that the former are, and must continue to be, a distinct and alien people; and third, that the upshot of this will be a repetition of the Israelites in Egypt. "This dark, swelling, muttering mass along the social horizon, gathering strength with education and ambition to rise, will grow increasingly restless and sullen under repression, until at length conscious, through numbers, of superior power, it will assert that power destructively, and bursting forth like an angry, furious cloud, avenge in tumult and disorder the social law broken against it."

He argues from the census of 1880 which, he states, gives upon the face of the returns a percentage of increase of 29.21 for the whites and 34.85 for the blacks and colored. Estimating foreign immigration as constituting 9 per cent of this increase he deducts this number to get the figures representing the native increase. For the blacks he deducts 5 per cent to allow for the errors in the ninth census. Then, taking it for granted that in the future the colored race will increase even more rapidly than in the past, he cancels this 5 per cent deduction making a normal rate of increase of 35 per cent. From this he further argues: "The white population, increasing at the rate of 20 per cent in ten years, or 2 per cent per annum, doubles itself every thirty-five years. The blacks increasing at the rate of 35 per cent in ten years, or 3½ per cent per annum, doubles itself in

*A lecture delivered before the Georgia Historical Society, June 6, 1887.

twenty years." On this basis it does not require much mathematics to find the population in the United States a century hence, so here are his figures:

Whites in United States in 1880 (in round numbers)	42,000,000
Whites in United States in 1985 (in round numbers)	335,000,000
Northern Whites in 1880	30,000,000
Northern Whites in 1985	240,000,000
Southern Whites in 1880	12,000,000
Southern Whites in 1985	96,000,000
Blacks in Southern States in 1880	6,000,000
Blacks in Southern States in 1980	192,000,000

This is figuring with a vengeance. We may well tremble for the future of our country if these figures are even approximately true. Their menace, Professor Gilliam thinks, is intensified by the second factor in his argument, namely, the impossibility of fusion of whites and blacks.

Mr. Tourgée, in his "Appeal to Caesar," endorses in the main the conclusions of Professor Gilliam, and quotes at length from his article. His treatment of the subject, however, is somewhat different, and it may be worth our while to look at his arguments and the spirit in which they are set forth. He, too, is fond of the tenth census. He gives tables showing the number and percentage of each race resident in each of the Southern States in 1880; also in the States in which the proportion of colored inhabitants does not exceed the general average of the South, or by the action of natural causes cannot be expected to increase; also in the States in which the proportion of colored inhabitants exceeds the general average in the South; and also in those States in which the number of colored inhabitants exceeds the white population:

"Seven of the Southern States have an average of 16.9 per cent of colored inhabitants; eight have an average of 47.6 per cent, and three an average of 56.4 per cent."*

He further confidently points to the following figures: In the United States the whites increased from 1790 to 1880, 1299 per cent. During the same period the colored race increased 769 per cent. In the so-called Slave States the whites increased from 1790 to 1880, 880 per cent, the colored race for the same period showed a gain of 775 per cent. These figures show that in the United States the two races increased as *thirteen* to *nine*, while in the Southern States *nine* to *eight* shows the relative increase.†

From tables showing the numerical increase and the per cent of gain of each race in each State of the "Border States" and the "Slave States" from 1790 he attempts to show that the increase of whites in the "Border States" has been greater than that of the colored during the same period, while in the "Old Slave States" the increase of the whites has been less than that of the colored. "While, therefore, the colored race has not in all the States kept pace with the white during the whole period since 1790, yet in this region which may be termed the 'Black Belt,' it has greatly outstripped the dominant race."* I quote his own words. And again "while in the 'Black Belt' the whites increased only *thirty-three* per cent, and the blacks *forty-three*. † From all of which figuring he unhesitatingly concludes that in the 'Black Belt' the whites are bound to decrease and the blacks to increase in relative numbers. And again he writes: "The census of 1880 reveals the unexpected and amazing fact that in a state of freedom the reproductive energy of the American negro not only exceeds that of the white race dwelling in the same locality, but exceeds his own ratio of numerical gain in a state of slavery." ‡

The chapter entitled "To-morrow in the Light of Yesterday" he closes with these words: "The tables which we have given showing the operation of the rate of increase in the colored race upon separate groups of Southern States indicate a still more startling fact; to wit, *that in the year* 1900, *or sixteen years hence, each of the States lying between Maryland and Texas will have a colored majority within its borders; and we shall have eight minor republics of the Union in which either the colored race will rule or a majority will be disfranchised!*"§ He may well put an exclamation point after these words. Much of what follows in his book is taken up with arguments to show that the influences at work in the future will favor even more than in the past the increase of the blacks and the decrease of the whites. He attempts to show further from the census that the colored population of the "Slave States" will be strengthened by immigration of blacks from the Border States, and that the white population will be weakened by the migration of whites to the Northern and Western States. Mr. Tourgée arranges everything to suit himself. Throughout his book he regards the African as the equal of the Caucasian. He writes: "Whether the colored man is the equal, the inferior, or the superior of the white race in knowledge, capacity, or the power of self-direction, has not specifically revealed to me." On such a basis it is not worth while to argue the question with him. His book is written in a sensational way, it shows a good deal of political and sectional fervor, and is altogether the product of one who

* "An Appeal to Cæsar," p. 115. † Op. cit., p. 119.

* Op. cit., p. 123. † Op. cit., p. 124. ‡ Op. cit., p. 129. § Op. cit., p. 135.

took an active part in the dark days of reconstruction and who did not make "bricks without straw."

The article of Professor Gilliam and Mr. Tourgée's "Appeal to Cæsar" called forth a reply by Mr. Henry Gannett in an article in the *Popular Science Monthly*, for June, 1885, entitled "Are We to Become Africanized?" In a short but pithy reply Mr. Gannett shows the weak points in the arguments of these writers, and refutes them by their own figures. I cannot do better than give his own words. In refutation of Professor Gilliam he writes:—

"An analysis of the author's curious method of deducing these results will, however, dispel this frightful vision of the future. The increase of white population between 1870 and 1880 was slightly less than ten millions. The number of immigrants during this period was a little in excess of two million eight hundred thousand. Subtracting the latter from the former, there is left a number which is 23 per cent of the population in 1870, not 20 per cent, as Prof. Gilliam has it. But what does this 20 or 23 per cent (it matters not which) represent? Certainly not the increase of native whites, as he interprets it. The census gives directly the numbers of native whites in 1870 and in 1880, and the proportional gain of this class during the decade was not less than 31 per cent. These are the figures he should have used in making his calculations.

"Now as to the increase of the colored element. Professor Gilliam at the outset, deducts from its rate of increase 5 per cent, representing about a quarter of a million persons, on account of the imperfections of the census of 1870. Concerning the omissions of this census little is known, except that they were generally distributed through the cotton States, were largely, if not mainly, of the colored element, and of that element, approximated nearer three fourths of a million than one fourth, and certainly exceeded half a million. Professor Gilliam's subsequent addition of 5 per cent 'as an obvious consideration points to the conclusion that the blacks will for the future develop in the South under conditions more and more favorable,' certainly is not warranted by the facts or the probabilities, and, as we are reasoning from what has been and is, and not from what may be, it looks very much like begging the whole question.

"Correcting Professor Gilliam's statements it appears that the ratios of gain during the past decade were, as nearly as can be known, as follows: For native whites, 31 per cent; for blacks, not above 25 per cent.

"But all such comparisons, based upon the results of the ninth census, are utterly worthless, No reliable conclusions regarding the increase of negroes can be drawn from a comparison in which these statistics enter. The extent of the omissions can be a matter, within certain wide limits, of conjecture only. The only comparisons which yield results of any value are those made between the statistics of the eighth and tenth censuses. That the former was, to a certain slight extent, incomplete, is doubtless true, especially in regard to the colored element, but the omissions were trifling as compared with those of the ninth census. A comparison between the results of the eighth and tenth censuses shows the advantage to be clearly in favor of the native whites, who increased 61 per cent in the twenty years, while the colored element increased but 48 per cent. This great increase of the native whites was effected in spite of the fact that the ranks of the adult males were depleted to the extent of over a million by the casualities of war, which the negroes scarcely felt."

In reply to Mr. Tourgée he writes:—

"In 'An Appeal to Cæsar,' by Judge Tourgée, the question of the future of the colored element is discussed from a somewhat different point of view. Without committing himself as to the increase or decrease of the colored element in the country at large, in proportion to the whites, the author finds, upon a somewhat superficial study of the statistics bearing upon the question, that in the South Atlantic and Gulf States the negroes have increased decidedly in proportion to the whites, while in those States which he classes as Border States they have relatively decreased. This massing of the negroes in what may, for convenience, be denominated the cotton States, coupled with the steady sharpening of the line of separation between the two races—a line which, as the author claims, becomes more and more accentuated as the inferior race increases in numbers and advances in education—will lead to inevitable conflict between the two races. As the negro becomes numerically the stronger, and, through education, appreciates more fully his present position, he will commence a struggle for the mastery, and then the days of the Ku Klux will be eclipsed in blood and slaughter. Such is the condition to which these ill-fated States are hurrying. To ward off this impending evil Judge Tourgée urges upon the general government the work of educating the blacks. Such, in brief is the 'Appeal to Cæsar.' * * *

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"It may, in passing, be suggested that a careful revision of his figures will show many impor-

tant arithmetical errors, which may modify very sensibly some of his conclusions. It is unnecessary to follow his methods of reasoning, as the truth regarding the questions at issue can be arrived at much more directly. The fact is, that the negro is not migrating southward. There is no massing of the colored people in the cotton States. In 1860 the colored element of these States formed 66 per cent of the colored element of the country. In 1880 it formed precisely the same proportion. Between 1860 and 1880 the colored element of the country increased 48 per cent. The same element of the cotton States increased, in this interval, in precisely the same proportion, neither more nor less. These figures are conclusive upon this point, and from them there is no appeal.

"But the fact remains that, in these cotton States, the colored element was in 1880, in comparison with the white element, slightly stronger than it was twenty years before. This, however, is due not to a southward movement of the colored people, but to a decrease in the rate of increase of the whites of those States. While the increase of the native white population in the country at large between 1860 and 1880 was 61 per cent, that part of the same element resident in the cotton States increased but 39 per cent. This low rate of increase among the whites might seem to establish Judge Tourgées position, though not in the way he states it, were it not for the fact that three-fourths of this increase took place during the decade between 1870 and 1880. The increase of whites in the South received a most effectual check during the four years of war, in which every male capable of bearing arms was in the field, and in which fully half a million laid down their lives. Since the war the white race has taken up a rate of increase equal to, if not greater than, that of the country at large, a greater rate than that of the colored people within its borders, and there is no apparent reason why they should not maintain it. It is not, then, a migration of the negroes southward which has caused their relative gain in these States, but it is the losses of the white race—losses which, however, are rapidly being repaired."

I have quoted at length from Mr. Gannett because I believe he has completely carried his point.

Writers like Mr. Tourgée, however, will convince many who have neither the inclination nor the opportunity to look carefully into the subject. According to them the South is a *cul-de-sac*, whose one point of entrance and exit has become closed compelling its elements to fight out for themselves the struggle for supremacy. They base their deductions upon census returns extending over a few decades, with gaps which must be filled up by mere conjectures and guesses, and wholly ignore certain great laws of human progress, laws which the study of history extending over centuries has enabled us to formulate. They seem to think that they have proved their case if they can show by statistics the greater prolificness of the negro race. But in a solution of the problem before us the question will not be which is the more prolific, but which has the better fiber, the more highly developed brain, the finer adjusted nervous system; in other words, which is the better able to maintain individual life, the better able to keep head and shoulders above the struggling crowd. Were it a question of prolificness simply man would have long ago given way to the animals and disappeared from the face of the earth; in fact he never would have been.

I think it must be admitted that the colored race is a more prolific one than the white, that is, in potential prolificness. Study the race in its natural habitat with all the conditions favorable to the growth of the animal, and its prolificness will exceed that of the white race whose home is in the center of a civilization where every thing tends towards individuation and the development of the nervous system, conditions inimical to great prolificness. But if the savage outstrips the Caucasian in the number of offspring, the Caucasian outstrips the savage in the ability to maintain individual life. In the animal and vegetable worlds the greater this potential prolificness the greater the waste; in other words, wherever the factors inimical to the increase of the species are many, Nature,

> "So careful of the type she seems,
> So careless of the single life,"

increases the potential prolificness to meet the odds against the mature development of the germ. The simpler the organism the simpler the genesis and the greater the prolificness; the higher the organization and the greater the differentiation, the more complex the genesis and the less the prolificness. But if the prolificness is small it is more than compensated for by the ability to maintain individual life. These are laws which Mr. Spencer has carefully elaborated in his "Principles of Biology." The cod's prolificness has been estimated at eight million eggs. I once took the trouble to estimate the number of eggs in the roe of a lamprey eel and found about two hundred and fifty thousand, and yet, comparatively speaking, how few of the ova of the cod or lamprey reach maturity. We find great prolificness at

times among savages, and yet their undue increase is counteracted by their very natures and the many external influences at work. If not carried off by disease their constant wars and savage life effect the same result.

The vital question then is not, how many offspring? but how many perfected and matured individuals? in other words, *what is the ability to maintain life when started?*

And so when Professor Gilliam imagines he can see this terrific increase of the colored race in the future, and argues his point by attempting to find its rate of increase when freed from the agencies inimical to that increase, such as the constant stream of immigration of whites from the East, as well as a begging of the whole question by taking it for granted that its capacity for increase will be even greater in the future than in the past, he places himself in the position of one who might see a great danger to the country from the natural increase of any prolific animal when freed from the many elements inimical to an absolute freedom of reproduction. Taking figures representing the natural rate of increase of rats in a year, say, and carefully excluding the adverse influences of cats, terriers, traps, poison, and what not, it would not take long to give a thousand rats to every man, woman and child. No "Pied Piper of Hamelin," nor an army of Pipers could prevent the dire consequences of such an increase.

The African, *under favorable conditions*, will outstrip the Caucasian in prolificness, but we must assert most positively that the African in the United States does not live under the most favorable conditions. Transferred by a superior race from his natural home to a country settled by the sturdy Anglo-Saxon, a country which is receiving a constant and steady stream of immigration of the white race from the Old World, he has been thrown directly into "the struggle for existence," and with everything against him. Let us admit, for the sake of argument, that the colored race in the two decades from 1860 to 1880 showed a large increase over the whites, and let us further admit that there were no exceptional causes at work to repress the increase of the native whites, and still we most emphatically deny that the figures in these twenty years can be used to prove the condition of the two races one, two, or more centuries hence. In the history of civilization the rise and fall of nations are subject to many fluctuations. The great forces at work moulding a nation's destiny are often interrupted or temporarily modified by exceptional causes which spring up to stem the great tide or to throw it out of its course for a time. But the result in the end will be the same; these great powers must accomplish their mission, must fulfil their destiny. History can show us more comprehensive laws and standards to judge from than the numerical increase of twenty years.

An interesting example in point comes to us from the Sandwich Islands. Up to the year 1830 there was every reason to believe that the Sandwich Islanders were steadily increasing. "Once they were a strong and robust people. In 1830, when the first census was taken—which was ten years after the American missionaries commenced their labors—the population was 130,000, but by the last census there were only about 40,000, one-third as many as fifty years ago. In the meantime religious institutions have been introduced, education has become general, and the family as an institution has been established. All the elements of a Christian civilization have been thoroughly established, but still the population has been steadily decreasing at the rate of about 1000 a year. How can this be explained? It cannot be from the want of food, nor a well-regulated society, nor change in climate, nor want of a good government; there have been no wars, no famine, and only two or three epidemics, which were quite limited. The cause of this loss of population cannot arise from any external condition or agents, but from some law growing out of and governing the physical system. It is well-known that certain diseases resulting from licentiousness and intemperance, have been brought by foreigners to these islands, causing a physical degeneracy in the people. So powerful and far-reaching are the effects of these diseases that neither the family, nor education, nor Christianity, can eradicate them. The law of propagation has been violated to such an extent that it threatens the extinction of that people."*

Malthus and his followers threw a flood of light upon the laws governing population and the increase of nations. Still their investigations did not carry them further than deductions from the rate of increase in the past, and such factors as means of subsistence, and the conditions of society and government. It is to the school of Darwin, Wallace, and Spencer that we must turn for valuable teachings, and the elucidation of laws which constitute all potent factors in the growth and development of humanity. They studied the subject from the standpoint of the naturalist. The great laws at work in the entire organic scale were found to apply to man. Expressions like "the struggle for existence" and "the survival of the fittest" epitomised the great processes which mould and

* "The Law of Human Increase," by Nathan Allen, M. D., LL. D., *The Popular Science Monthly*, November, 1882.

differentiate man as well as the animals. Herbert Spencer in his voluminous studies in biology and sociology has not only laid down an elaborate schema for the development of this new science, but he has done much to fill in the outlines first broadly sketched. In 1852 he published a "New Theory of Population." In this he "maintained that an antagonism exists between individualism and reproduction; that matter in its lower forms, for instance, of vegetables, possesses a stronger power of increase than in all higher forms; that the capacity of reproduction in animals is in an inverse ratio to their individuation; that the ability to maintain individual life and that of multiplication vary in the same manner also, and that this ability is measured by the development of the nervous system."* It was one of the first attempts to show that the laws governing the rate of human increase were based upon physiology; that the healthier the body and the more harmonious its functions the better adapted it is to carry out its normal rate of increase.

It is this thought, especially, which I desire to impress upon you as the pivotal point in my argument, namely, that the African, removed from his natural habitat and thrown into a civilization of which he is not the product, must suffer physically, a result which forbids any undue increase of the race, as well as the preservation of the race characteristics. It is from this standpoint alone, I think, that the future of the race can be predicted with any degree of certainty. A prophecy based upon the census returns for a few decades, and which ignores completely the laws of human increase taught us by the study of history and the recent developments in sociology and biology, must necessarily be faulty, if not wholly wrong.

The two points in my argument, then, are these:

First, that the African race, *an inferior race*, transported by force from its natural habitat to a distant country, and thrown by emancipation, after a long period of slavery, into a struggle for existence with a superior race, can never gain an ascendancy, but must in time die out or become so merged into the dominant race as to finally lose its identity. And, second, that already there are evident signs that the physique of the race is degenerating, as shown by the rate of mortality as compared to the white race, and by the appearance of certain pathological conditions which point to an even higher rate of mortality in the future.

It would hardly seem necessary to dwell at any length upon the conditions which stamp the African race as one greatly inferior to our own. When writers like Mr. Tourgée ignore this fact, and not only ignore it but seem to put the two races on an equality, it is not necessary to discuss the question with him, but for the sake of our argument we shall indicate briefly the salient points of difference between the Caucasian and the African as taught us by ethnology and comparative anatomy.

The pure negro is the representative of a race whose natural habitat is the African mainland. Though spread over a large area it shows a greater uniformity in physique and moral type than is to be found in the other great divisions of mankind. To the ethnologist it marks a type the lowest in the scale of humanity.

A. H. Keane gives us the following points as indicating the low type and nearer approach in body to the quadrumana or anthropoid apes:

"(1) The abnormal length of the arm, which in the erect position sometimes reaches the knee-pan, and which on an average exceeds that of the Caucasian by about two inches; (2) prognathism, or projection of the jaws (index number of facial angle about 70, as compared with the Caucasian, 82); (3) weight of brain, as indicating cranial capacity, 35 ounces (highest gorilla 20, average European 45); (4) full black eye with black iris and yellowish sclerotic coat, a very marked feature; (5) short flat snub nose, deeply depressed at the base or frontal suture, broad at extremity, with dilated nostrils and concave ridge; (6) thick protruding lips, plainly showing the inner red surface; (7) very large zygomatic arches—high and prominent cheek-bones; (8) exceedingly thick cranium, enabling the negro to butt with the head and resist blows which would inevitably break any ordinary European's skull; (9) correspondingly weak lower limbs, terminating in a broad flat foot with low instep, divergent and somewhat prehensile great toe, and heel projecting backwards ('lack heel'); (10) complexion deep brown or blackish, and in some cases even distinctly black, due not to any special pigment, as is often supposed, but merely to the greater abundance of the coloring matter in the Malpighian mucous membrane between the inner or true skin and the epidermis or scarf skin; (11) short black hair, eccentrically elliptical or almost flat in section, and distinctly woolly, not merely frizzly, as Richard supposed on insufficient evidence; (12) thick epidermis, cool, soft, and velvety to the touch, mostly hairless, * * *; (13) frame of medium height, thrown somewhat out of the perpendicular by the shape of the pelvis, the spine, the backward projection of the head, and

* Quoted by Nathan Allen in the *Popular Science Monthly*, for November, 1882. See further the *Westminster Review*, for 1852, and also "Principles of Biology," Vol. II., pp. 391-508.

the whole anatomical structure; (14) the cranial sutures, which close much earlier in the negro than in other races." *

These anatomical characteristics are well known to every careful observer; they mark a distinct race of mankind and show conclusively an inferior type. The natural habitat of the race is in itself indicative of its inferiority, for whatever Egypt may have been in the past, and history certainly points to a high order of civilization ages before the Christian era, Africa for centuries has been the home of the savage. It is the cranial and facial characteristics which have the direct bearing upon the points at issue. The prognathism, the facial angle, the weight of the brain, the thickness of the skull, and the early closure of the cranial sutures all point to a lower intellectuality and an inferior nervous system.

The negro infant starts apparently with a great advantage over the white child; it is more precocious in every way, and maturity comes sooner. But this rapid growth soon reaches the end of its tether, and at a time when the negro has attained its full growth, the white child is but beginning to develop qualities which in time advance it to a point unattainable by its less fortunate rival. Even when educated up to a certain point by the efforts of, and association with, a higher race, the mind is in a condition of unstable equilibrium which reverts in time back to its original level when the civilizing influences have been withdrawn. Throughout the animal world whenever artificial conditions have been brought to bear to produce results different from those which nature attains by her slow methods, the new products when left to themselves fall back to their original starting points, or but little in advance of them. It will be like the stone of Sisyphus. In the two centuries and a half of association with the Caucasian the race in certain directions has been much benefited by the higher civilization. If these associations were to be suddenly and completely cut off, and the race were to be left to its own resources, its future would be a retrogression rather than an advance.

I am speaking now of course of the race without any admixture of white blood; with it the problem becomes a different one; the intellectual level rises, and the more this element enters into the combination the nearer the new product approaches the Caucasian. We may meet with the intellect of an Alexander Dumas, or Dumas, fils, though I think the product a rare one. It is in the large mixed-element that we find examples of those who have risen above the multitude of their race and have shown qualities which ally them closer to the superior race. To writers like Mr. Tourgée this factor of miscegenation does not enter at all into their calculations. They speak of whites and blacks as though it were a question of color only, with a sharp color line separating the two races, a mere difference in the amount of pigment in the Malpighian layer. One would think from their treatment of the subject that equal political rights and equality before the law meant equality moral, spiritual and intellectual. They lump together the entire colored population as a homogeneous mass to be measured by one standard. They bring forward examples of colored men who have attained considerable reputation, and have shown, perhaps, fine mental parts, to show the beneficial influences of education and civilization upon the African, and the possibilities of the race, and ignore the influence of the white admixture, and the credit due thereto. It would be an interesting point to know the percentage of this mixed-element to the pure African. I am persuaded that it is much larger than generally believed. The census unfortunately has made no distinction in the enumeration. It is, however, a distinction which should be made, and any correct returns would point to many significant tendencies, and be a *point d'appui* for our argument. This mixed-element indicates the fusion and assimilation going on. That it bears the same social stigma as the darker color shows that the barrier between the races is a social but not a physiological one, for underneath this barrier miscegenation goes on through many channels. This new product is a large one though it is largely unstable. What I may have to say of its instability I must reserve for another place.*

Miscegenation will go on in the future as it has gone on in the past. Its illegality will be no bar to it, though the process of fusion will be retarded. To my mind race prejudice will not be in the years to come what it has been or what it now is. Time alone, throwing the days of bondage further back into the past, will in itself modify and soften these feelings of race, especially when,

* "Encyclopædia Britannica;" Article Negro.

* The question whether the mere mixing of the races in itself results in an unstable product is one which I have not been able to answer to my own satisfaction. My opinion is that this instability is largely the direct inheritance of a weakness and degeneracy of one or both parents, as naturally follows the laws of reproduction and inheritance. Still there seems to be a factor outside of this, a factor dependent upon miscegenation itself. The mixing of the different nationalities of the white race often appears to strengthen the new products, but the ethnic chasm which separates the Caucasian from the African is too wide for nature to bridge satisfactorily. The bridge is but temporary and gives way to the strain it must eventually bear. Whatever the true explanation may be, the fact remains that this mixed-element is an unstable one with a high rate of mortality.

by the gradual fusion, the color will become lighter and the mixed-element will exhibit qualities allying it more and more to the Caucasian. It will not be in our day of course, nor in the next generation; it may take centuries, but it will come.

And now let us take up the second factor in our argument, a factor which has grown out of the first.

A deterioration in physique may be looked upon as the natural result of the many influences at work arising from the transporting of the race to a foreign soil to be thrown into the struggle for existence against a superior race, a struggle which can have no ultimate issue but defeat, and by defeat I mean an inability to maintain the distinctive characteristics of the race. The struggle will be a slow process of fusion by which the weak and unstable elements will disappear while that which has any permanency will become so blended with the dominant race as to lose its individuality. Of the stable and the unstable the latter is by far the greater; its instability can be measured by the physical degeneracy. Even to-day to call the colored race the African race is something of a misnomer because it has undergone many modifications. A change in language, in soil, and in climate, a change of surroundings and associations are potent influences to eventually destroy the original African traits. This struggle may, perhaps, be better described as a process of assimilation by which the elements ill-adapted to the growth of the dominant race are thrown off, while that which is assimilable becomes gradually absorbed into the main growth.

Let us glance a little more minutely into these factors of change and decay. The change of habitat alone, a change of soil and climate, has a certain influence. Man, like the animals and plants, bears the stamps of geographical areas. A race indigenous to a certain country acquires through many generations characteristics the formation of which can be traced to climatic and telluric causes. One of the most interesting departments of biology is the study of the geographical distribution of animals and plants; and man is no exception, for in him, too, we can trace the effects of the ground he treads and the air he breathes. And when man is removed from his home to a distant country, and is brought under different climatic, and telluric conditions, he feels the change in proportion as the new environment differs from the old. Nature at once goes to work to adapt the new-comer to his new surroundings. The greater the change the harder the process of adaptability and the greater the waste and the loss of life. The medical histories of wars in distant climes in which Europeans have figured show that the loss of life from a new environment has often equalled, if it has not exceeded, that from the casualities of war. The Esquimaux can as little live in the tropics as the Hottentot in the polar region.*

Now while the change of the African to America has been more in longitude than in latitude it must still have an influence in modifying the race. The negro without any other modifying influences would be a different man five hundred years hence from the one just transported from his natural home.

But a factor much more potent is the struggle for existence, and not only a struggle within the race but a struggle outside with a superior race. There is no law in the physical world more relentless than this very struggle for existence and survival of the fittest. From the cradle to the grave it is one continuous fight with man and the elements. It is a struggle for mere living, a struggle for ease and comfort, a struggle against exposure, privation and disease; and in this struggle the weaker die and the stronger live. We may talk of universal brotherhood, but the stronger will rise and rule and the weaker will go to the wall. The denser the population the thicker the fight. It is in the great cities that we see this struggle at its fiercest—the poorer and weaker on one side, and the stronger and richer on the other. It is the difference between poverty, hunger and dirt, and ease and comfort and luxury, and a difference greater still, a difference in the sick list and in the death rate; for with poverty and close quarters, with dirt and exposure and crime, come sickness and death.

The situation of the colored race is a peculiar one. After being carried off from their home to a distant land and held in bondage for years, they are suddenly set free and thrown upon their own resources. That they have even in a measure stemmed the tide is indeed to be wondered at. During slavery it must be conceded, I think, that so far as the merely physical man was concerned they were better off. Such bondage would be well physically for a large portion of the white race. They were out of the struggle for existence with their superiors; they were cared for like so many valuable animals; it was to the interests of their owners to do so; though worked

*An interesting example among the lower animals of the fatal influences of a change of habitat is seen in the monkeys brought to this country. They almost invariably die from consumption. I once examined the bodies of a number of monkeys from our menageries and zoölogical gardens, and in every case I found pulmonary tuberculosis in all its stages. The change from the pure air of the forest to the confined and vitiated air of our centers of population is fatal to them.

hard they led regular lives; the dissipations and excesses which enter into the life of a free people they were withheld from; when sick they had the best medical attention obtainable; and all the information which I have been enabled to obtain has satisfied me that the race was a healthy one, even healthier in the main than the white.

But since the war and emancipation things have been reversed. Suddenly thrown upon their own resources their struggle began *in medias res;* freedom gave loose reins to the animal; the doors were opened wide to the vices and excesses of a material civilization; their life became an irregular one; these vices and excesses which like parasites have grown with the growth of our civilization became a part of their life, and these parasites in their new soil have shot down their roots deeper and have obtained a firmer foothold. This has been the history of the introduction of civilized vices into all uncivilized communities; whiskey, good or bad, certainly disagreed with the poor American Indian, and to-day in India it is playing sad havoc with the multitude. The explanation is that, however small self-control over the appetites exists in the Caucasian it is practically wanting in the savage who drains his cup to the dregs. It is bad enough for the white man but it is worse for his inferior.

These evil influences are bearing their fruit, and bitter fruit it is, too, a fruit which has only become very evident in the last decade.

A METHOD OF DRUG ACTION.

By Henry G. Hanchett, M.D., New York.

SOME recent articles in medical papers give evidence that the old subject of the mode of action of drugs in the human economy, has not yet lost its interest to the profession; and while it is probably true as pointed out by Dr. Clarke in his paper "On Drug Action" (see the Times for August last) that we can really know nothing of the essence of that action until we first learn what is the essence of life itself, it is yet well worth while to collect, compare and theorize upon the facts of drug action that we can grasp, since only in this way will it ever be possible to reach the desired goal of absolute precision in therapeutics. Science finds a place for theory, and although the true scientist must ever hold himself ready to abandon any theory the moment it is found to be inconsistent with the facts, there are still few things which so stimulate the search for and the perception of new facts as does a well-considered theory into which the facts when found may be fitted. The thoughtful disciple of Esculapius has ever desired to be a rational practitioner—however much he may have felt himself forced into empiricism—and many are the theories of drug action that have been advanced by humorists, dogmatists, methodicists, chemicists, vitalists, homœopathists, biochemicalists and others, each of which has perhaps contributed something in its turn to the advancement of medical practice.

In solving any problem or investigating any phenomenon the first essential is to exclude extraneous elements, and nowhere is this more difficult than in pharmacology. We all believe that the same cause operating under the same circumstances will always produce the same effect, and we all believe that drugs taken into the living body will cause effects; yet so difficult is it to assure ourselves that the circumstances are the same, that to-day able thinkers and observers are far from agreement as to what are the effects of the two most extensively used drugs—alcohol and tobacco. If, then, we are ever to come to any understanding of the action of drugs we must make our investigations in a manner that will exclude as many extraneous circumstances as possible, will enable us to keep as uniform as possible those circumstances that cannot be excluded, and that will give us opportunities for observing as many as possible of the phenomena bearing upon our problem. Our work is more or less in the dark at best, and we will do well to advance along a path suggested by a theory formed as early as our results can be made to justify it.

A drug, for the purpose of our investigation, may be defined as anything that is capable of producing an effect other than nourishment when taken in or applied to the body. This definition will allow us to investigate comparatively simple substances in a way that will carry out the conditions just laid down, and a substance that will answer every purpose is ice applied to the skin.

A piece of ice taken into the hand and held two or three moments will produce very marked effects. While it is in contact with the skin it will cause its temperature to fall and the superficial vessels to lose a large proportion of their blood supply. But effects do not cease upon breaking the contact, although the effects just noted do not continue. The hand gradually becomes warm and the vessels full of blood, and the remarkable point is that the hand becomes warmer and the vessels fuller than they were before the experiment was begun, and warmer and fuller than neighboring skin and vessels with which the ice had no contact. In other words nature seems to have resupplied to the part more heat than was

removed from it by the external application of cold, just as in the case of a fracture or the mechanical injury of a part, a surplus of material for repair—manifested by swelling—seems to be sent to the vicinity. If now we repeat our experiment with the ice, but allow the contact to be maintained an hour or more instead of two or three moments, we shall find the primary effects the same as in the former instance, but upon removing the ice the reaction will not be noticed for a long time and when established it will not manifest any surplus of heat and blood at the point of contact. In fact it will appear that reaction against the ice application is overcome by the "size of the dose," and that the skin eventually resumes its normal condition in response to muscular exertion and the repairative powers of nature by a process of extension of conditions from healthy to unhealthy parts that manifests none of the phenomena of reaction.

From the foregoing and similar experiments we may deduce the theory that all drugs are hostile to, and when ingested, attack some portion of the human economy; that the *vis medicatrix naturae* always responds to these attacks with more or less vigor and if they are easily overcome always displays a surplus of energy at the affected point which surplus may be applied to the relief of a pre-existing disease, manifesting itself at that point; and that by ingesting a sufficient dose (which will vary as the condition of the affected part of the economy varies), the re-active powers of the system may be overcome and the primary effect of the drug may be produced and maintained.

This theory at once explains the cures of homœopathy and at the same time shows us how ridiculous is the claim of some disciples of that school, that theirs is the universal, the only law of cure. If we have to deal with a local coldness of the skin, for example, and treat it by the brief application of cold in the form of ice, we shall undoubtedly make a homœopathic cure by calling out nature's re-action against a primary effect very similar to the disease. But if we treat a diarrhœa by the ingestion of alcohol we shall arouse the reactive powers of nature to repel the attack of the alcohol and to eliminate it from the system, and in so doing we shall temporarily improve the circulation, nourishment and tone of the whole system and as a consequence induce a cure of the diarrhœa, but in no sense a homœopathic cure, although one brought about by re-action against the attack of the drug used. And when we treat an obstruction of the bowels by full doses of croton oil the cure which we may confidently expect will be due to what is commonly thought to be the primary effect of the drug, and a very good cure it will be in many cases.

This theory will do away with the doctrine of substitution, with Hahnemann's idea of a drug disease more powerful than the natural disease and attracting the latter to it, of the Swedenborgian idea of the spirit of the drug—the "potency" of dilutions, and it will materially aid both the study of remedies and their application in practice.

RETROSPECTIVE THERAPEUTICS.

By ALFRED K. HILLS.

IT HAS been truthfully said that "A little knowledge is a dangerous thing," and the maxim cannot be more usefully applied than in respect to therapeutics. It is true not only so far as it concerns the regularly educated practitioner of medicine, but also of the layman who has learned to dabble a little in this line. It was with a view to keeping himself abreast the times in therapeutic means that the writer began these excerpts, and they have appeared from time to time in this journal at the request of many esteemed colleagues, under the head of "Retrospective Therapeutics."

We have received numerous letters of encouragement from many readers, who have urged us to go on with the work, and we shall continue it for a time.

It will be a great help and satisfaction if our readers will aid us by reporting their results with any of the agents to which we may refer.

We wish it distinctly understood that we do not intend to approve of all the methods which may be found in these articles, and many of them the writer might hesitate to employ, but in making a record of this kind it was thought best to cover the whole field of therapeutics as far as possible, allowing each article to stand upon its own merits, regardless of his own views, and of the school of medicine with which the author might be identified.

It can be imagined with what pleasure we received the report from Dr. Miner, of his case of tubercular meningitis, printed in our September number, suggested from an excerpt on the use of iodoform in this affection, in our "Retrospective Therapeutics!"

It is for the purpose of helping others as well as ourselves that we do this work, and we shall be glad of suggestions and criticisms upon any of the subjects mentioned, and be just as glad of reports of failures as for confirmations, and both shall be printed with suitable credit.

Salicylate of Sodium.—We quote from the *London Practitioner* as follows:

The action of drugs in megrim and gout is remarkably similar. Trousseau and others have used colchicum with benefit in megrim, and other observers have remarked on the similar curative effects that certain purgatives, as calomel, have in both gout and megrim; and, again, others have used iod. pot. with considerable success; but the great value of salicylate of sodium in some of these headaches is more remarkable still; it seems to me to be most certainly curative and not merely palliative, as it removes the concomitant gastro-intestinal troubles along with the headache. Thus a dose of brom. pot. and sp. ammon. aromat. will sometimes remove a slight headache, but it will probably return; with salicylate treatment it is quite a different matter, the headache is gone once and for all, and shows no sign of return for a considerable period; its action in this respect is very similar to that of calomel, and, like calomel, it seems to free the secretions of the mouth, and, at the same time, slightly relaxes the bowels.

The dose of salicylate, as recommended by Dr. Brunton, is two to three grains every quarter or half hour, for three or four doses or more, and begun when the headache first comes on: this is sufficient.

Antipyrin resembles sodium salicylate in its action, and is recommended by Dr. Neumann (*Berl. Klin. Woc.*) for further trial in chronic rheumatism of the joints and in rheumatic neuralgia. Dr. A. Walker (*Brit. Med. Jour.*, Nov. 7, 1885) has observed it in two cases of typhoid fever, to produce reduction of temperature to about normal, and good refreshing sleep for five or six hours; 15 grains of the remedy were given at 9 P. M., and 7½ grains each at 10 and 11 P. M. Antipyrin was also found useful to produce sleep in several cases of pyrexia in young children. Teaspoonful doses three times a day of the following mixture have been used by Dr. Dumolard in typhoid fever: Antipyrin 20, Jamaica rum 30, water 150, and sirup 150 grams. Sweet spirits of nitre and antipyrine are incompatible.

Atropine in doses of $\frac{1}{120}$ grain has been used by Dr. Gray in acute coryza with the effect of relieving the headache, reducing the temperature and diminishing the discharge, but the concomitant symptoms ought to have been stated!

Tartar-Emetic for Tetanus.—The *London Medical Record* mentions three cases of tetanus, two traumatic and one rheumatic, successfully treated with tartar-emetic. Five centigrammes were given the first day in one dose; twenty centigrammes in divided doses the next day. The dose was increased until forty grammes a day were given.

Thallin (*Canada Med. Record*) has nothing to do with the metal thallin, although they both derive their name from the same Greek root. Its chemical formula is $C_{10}\ H_{15}\ NO$, its formal name is hydrate of parachinanisol or, if you prefer, you may call it tetrahydroparamethyloxyquinolin. It is a pale yellow or white powder with an agreeable, aromatic odor, said to resemble that of the trailing arbutus. The taste, however, is bitter, pungent and disagreeable. It is easily soluble in water, with difficulty in alcohol, and insoluble in ether. The first to use it was Von Jaksch in Nothnagel's clinic. He concludes that thallin is very similar in its action to antipyrin, although in much smaller doses, but claims that it is more rapid in its action, although the fall of temperature produced lasts for a shorter time. It is also less dangerous, inasmuch as it never causes collapse, as does the latter drug. Both agents may produce profuse sweating; and chilliness or rigors often occur with the subsequent rise of the temperature after the action of the medicines has ceased.

These conclusions he reached by giving thirty cases of various diseases, accompanied by fever, alternating doses of antipyrin and thallin. His investigations, throughout, were most careful and thorough. The usual dose of thallin as administered by him is four to fifteen grains, given at one time, and repeated in one or two hours if no effect is produced. The degree of reduction of temperature obtained varies somewhat, and the duration of the lowered temperature lasts usually but a few hours.

Dr. Griffith concludes from clinical experiments that thallin is efficacious in reducing temperature in most cases of fever, but frequently decided depressions of strength occur (with profuse diaphoresis) during its administration, and it must be given with great care to debilitated patients.

Loco Weed (Oxytropus Lambertü and Astragalus Mollissimus) is a plant very abundant on the high plains and in the mountains of the extreme Western States, ranging from British America to Mexico. It is said to act as an intoxicant to animals who feed upon it and causes loss of flesh, general lassitude, and impaired vision, and finally the animal becomes vicious and unmanagable and as if affected with "blind staggers," when it has developed into a fully marked disease death terminates from inability to digest nourishing food. When accidentally eaten by man it has caused a marked form of insanity, with ideas of persecution, false hearing and false sight. Epilep-

iform convulsions sometimes result, but these are of a temporary character. The patient, as a rule, recovers. We note that Prof. L. E. Jayne, of the Kansas State University, Department of Pharmacy, and the Board of Agriculture of that State, are investigating the physiological effects of this plant upon animals.

Hydrofluoric Acid.—In his remarkable treatise on this new remedy, Chevy concludes that the vapors of hydrofluoric acid can be inhaled without inconvenience when diluted with air in the proportion of 1:1500. It is an antiseptic, and a powerful antiferment, stopping the fermentation of milk, urine, bouillon, and preserving meat in the proportion of 1:3000. Its employment in pulmonary tuberculosis, diphtheria, and as a dressing for bad wounds, has yielded results worthy of further study. Great care should be exercised in its use in asthmatic, hemorrhagic, or emphysematous subjects.

Seiler submits his patients to daily inhalations of an hour's duration, and twenty or thirty in number. He saturates the air by a spray apparatus, which contains a mixture of the acid and water in the proportion of 1-3. This air is forced into the inhaling room in the proportion of about ten metres to a cubic metre.

The inhalations are absolutely innocuous, and, he affirms, of notable benefit.

Acetanild has been found by Dr. W. Osler, (*Therapeutic Gazette*) to exert a calmative action on the nervous irritability of phthisical patients. Dr. Dujardin-Beaumetz (Bull. Gén. de Thérap.) has found it of value in the insomnia resulting from neurasthenia and in epilepsy. Dr. Weill has had the same experience.

Nux Vomica.—M. Brugnoli (*Journal de Médicine*) has employed nux vomica successfully in the nervous movements of pregnancy, gastralgia, dyspepsia, hypochondriasis, nervous palpitations of the heart, nervous and periodic cough, asthma, and finally, in albuminuria. This remedy acts either on the pneumogastric, or on the great sympathetic, or on the spinal cord. He records a case of a lady affected with a severe cough recurring every evening, and lasting throughout the night, who was cured in two days by the use of nux vomica. Another patient was affected every evening with violent cough accompanied by catarrhal expectoration, and was also cured in two days by the alcoholic extract of nux vomica. Cough may also be allayed by this means, whether it be caused by bronchitis, by pneumonia, by pulmonary phthisis, or by emphysema. It proves a useful remedy also in cases of cardiac pulsations, and in irregular or too frequent action of the heart. In albuminuria, M. Brugnoli thinks the administration of nux vomica has retarded its progress to some extent, especially in cases of scarlatinal albuminuria.

Beer Yeast.—The experiments with beer yeast, made by Dr. Heer, the attending physician of the Penal Institution at Ratiber, as communicated by him to the *Deutsche Med. Zeitung*, may be of considerable interest. The following were the conclusions arrived at:

1. Yeast is probably a powerful remedy for zymotic diseases, and in scorbutis and purpura, undoubtedly so.

2. In several cases of well-advanced tuberculosis I have seen it overcome high febrile conditions, followed by a well-established arrest of the solidifying of the lung tissues, which had progressed several months.

3. The exhibition of yeast is very easy; doses up to two litres per day were given without the slightest bad results.

4. The remedy is readily taken by the patient and replaces the use of milk.

5. By its easy assimilation it becomes a nutrient.

Dr. Heer suggests the administration of beer yeast in diphtheria, and hopes for the best results from its use. As beer yeast can be obtained at any lager beer brewery, it would seem as if our physicians should give this new remedy a thorough trial.

Bi-Sulphide of Carbon.—Dr. Marc Jousset, in *L'Art Medical*, March, 1887, gives a review of M. Sapelier's thesis on bi-sulphide of carbon, and deduces therefrom the following therapeutic conclusions:

The chief symptoms and principal lesions noticed in the experiments and cases of poisoning were:

Muscular weakness; a progressive slowing of the respiration, small pulse, coldness of the extremities, cold sweats, arrest of the heart in diastole, diarrhœa, vomiting.

These symptoms lead me to think of carbon disulphide in the period of depression in cholera, and had we not already a goodly number of remedies well-tested, we should recommend it here; one can always remember it in case of need.

We notice, too, in the thesis by Sapelier (p. 118) that "Hastings and Bell had observed the efficacy of bi-sulphide of carbon in an emulsion with the white of egg," in cholera, before the period of collapse.

The diarrhœic symptoms seemed sufficiently marked in the cases of poisoning, to suggest its use in simple diarrhœa.

It may do good service in simple gastric ulcer;

in fact, we see among its symptoms, distention of the stomach, vomiting, gastric hemorrhage, and ulcers of the duodenum as well as of the pyloric end of the stomach.

We find, also, evidences of hæmaturia which may indicate its use in renal hemorrhage.

We have seen that in the presence of alcohol, carbon di-sulphide produces sulphuretted hydrogen; the homœopathic dilutions made with this substance, then, are dilutions of sulphuretted hydrogen, and it is this last-mentioned drug that will be prescribed unless our method of preparation be altered.

In order to give carbon di-sulphide, our first dilutions must be made with water, as is the custom in preparing the attenuations of the acids.

We may consider sulpho-carbonated water, which is a solution of about 1 in 1000, as the first dilution; we are to continue with water up to the third, and after that with alcohol.

CLINIQUE.

REPORT AND REMARKS ON A SERIES OF TWO HUNDRED CATARACT OPERATIONS.*

By C. A. Bucklin, A. M., M. D., New York.

THE FIRST hundred of this series were cases which came under my personal observation while following the teachings of Hutchinson, Bowman, Cooper, Bader and Liebreich, of London; Mooren, of Dusseldorf; Rothmund, of Munich, and Arlt, Stellwag, Jæger and Mauthner, of Vienna. The second hundred I operated upon myself. I think the accidents which occurred in the first hundred cases were quite as instructive to me as my own subsequent experience in operating.

Liebreich has had many flattering successes, but, on the other hand, he never could tell when he would have the most discouraging failure, from no other cause than the peculiarity of his operation. His case of corneal sloughing, above mentioned, fell later into Bader's hands, and he did what I never saw intentionally done before. Although the patient was seventy years of age, he made repeated discissions of the lens in the remaining eye, and after several months caused it to absorb sufficiently to give the man practical vision, a slight portion, however, of the nucleous remaining in the center of the pupil.

The above experiment thoroughly demonstrated to me that it was practical to operate upon cataracts long before they were ripe.

In a conversation with the late Dr. Frank Hamilton, he said, when the results of couching at the time of the operation were satisfactory to him, they were usually, after a time, unsatisfactory to the patient; however, when he sometimes completely failed in displacing the cataract from the pupil, the results at a later time became permanently satisfactory to the patient. In the first instance he displaced the lens into the chamber of the vitreous, where it became a foreign body; in the second, his couching needle crushed through the lens, making an extensive discission. The lens, as in Bader's case, was gradually absorbed by the aqueous coming extensively in contact with its substance; in this way he certainly did obtain satisfactory and permanent visual improvement. Dr. Agnew, of this city, believes that the methods of Liebreich, owing to the prejudice of the profession against the man, never have received a fair trial, and he is giving them a trial.

Cocaine is excellent for all operations except enucleation, iridectomy and cataract; I am fully convinced of its dangers in the two latter operations.

The german operators learned from experience that the débris left behind from attempting to remove a lens which had a clear cortical layer caused severe iritic reactions. They insisted on removing the iris sufficiently to prevent its corners from becoming entangled in the wound. They tore more frequently than cut the anterior capsule. I think an operator in 1887, who would have had the temerity to remove a lens from the eye, through which fingers could still be counted at four feet, would have found poor support from his colleagues had he been prosecuted for damages. Arlt, of Vienna, would wait for years till the layer of transparent cortex had become opaque. This was at that time the only way of avoiding the injurious effects from débris being left in the eye, thus causing iritic and irido-cystitic complications, and it cannot be denied that this was very sound practice.

The general introduction of peripheral capsulotomy, for all cases of cataract extraction, by Dr. Knapp, certainly obviates, to a large extent, the objections to have a small amount of cortex remaining.

I have been continually experimenting, and now find no trouble in removing cataracts through which fingers can still be counted distinctly at four feet, and I am able to obtain a perfectly clear pupil without iritic complications.

* An abstract from the *Medical Record*.

My experience is, that out of one hundred cataract extractions ninety-six could count my fingers at from two to four feet. Two persons having cataract, who could not count fingers at any distance, lost their eyes from complications following cataract extractions. These failures were caused by accidents resulting from a hypermature condition of the cataract. I have carefully sought for the reason why experience thus far has brought me to a different conclusion from that arrived at by Dr. Noyes, whose experience certainly has been extensive. Under "Cystotomy," p. 246, I think I find an explanation of how our experience differs. He passes a cystotome below the lower pupillary margin, maing a clean vertical cut in the anterior capsule. Now, I have made a horizontal peripheral cystotomy, corresponding, as nearly as practicable, to the upper margin of the lens; occasionally, owing to an extra large lens, or a failure on my part to make the opening in the capsule large enough, the capsule has been torn in such a direction as to make an opening which was vertical, and extended below the pupillary margin. In every such case iritis followed, and what should be the movable margin of the iris became fastened to the capsule at the point of this vertical rupture.

The hundred cases which I have operated upon have taught me one lesson. With an empty stomach, profound etherization, absolute cleanliness, an iridectomy sufficiently broad to prevent any possibility of the corners of the iris becoming fast in the wound, and a clean peripheral cut in the capsule, the operation will not be complicated by any accident which is within the control of an operator. The wound will close in four days, without sufficient reaction for the patient to know from his sensations that the cataract has been removed; extensive hemorrhage into the vitreous at the time of the operation, or soon after, from the rupture of a diseased blood-vessel, is an unavoidable accident.

My results I sum up as follows: *ninety-six could read the daily papers; two,* from disease existing behind the cataract, could not read, although the wound healed promptly without inflammatory reaction; *two* were complete failures, from causes above detailed, and for which the unbiased scientist can in no way hold operator or operation responsible.

I have not selected my cases, but have thus far operated upon all cases presenting, irrespective of complications known to exist previous to the operation. The two cases where the light of a candle in a dark room could not be seen at a greater distance than ten feet, were very uncertain in locating the position of the light, and had been advised against an operation by very competent authority, owing to the probable complicated nature of the cataract. While I acknowledge the perfect soundness of the advice I cannot help calling attention to the instructiveness of the result, namely, vision sufficiently practical to read the daily papers. The prospective question in ophthalmology will be, how shall we treat such cases of cataract where the disease is sufficiently advanced to prevent the individuals from following their usual vocation? the prospects are not inviting where an attempt is made, after a preliminary iridectomy, to bring sufficient traumatism to bear upon the lens by applying the force through the cornea. Is it better to attempt to remove the cataractous lens at any stage, or to resort to some artificial means to ripen it?

If the lens is to be ripened artificially, shall it be done by doing an iridectomy, and then introducing a delicate, polished instrument into the eye, stroking the anterior surface of the lens directly with its smooth surface? or shall we dilate the pupil, and introduce into the eye a curved needle, the surface of its curve being a polished surface with which the lens may be carefully stroked? or shall we carefully make a small discission of the lens for the purpose of ripening it? my experience thus far enables me to say that they may still count fingers up to six feet before one is warranted in exposing his patients to the accidents which may follow any attempt to artificially ripen a cataract. It is better, when they cannot count fingers at a greater distance than six feet, to remove the lens and deal with any subsequent pupillary opacity as occasion requires, after all inflammatory reaction has subsided.

We must look to the experience of the future to decide which of the above methods is preferable.

Dr. H. I. Ostrom has observed that pure iodoform when applied to a cancer of the uterus, is not unfrequently followed by hemorrhage within twelve hours after the application is made. In one case of rapidly progressing epithelioma which he temporarily arrested by curetting, four attempts were made to pack the cavity with iodoform, each one being followed within the time mentioned by profuse hemorrhage. Dr. O. is at a loss to account for this, save upon the hypothesis that iodoform exerts a peculiar action upon the cells of some stage of uterine epithelioma, causing their destruction, thus favoring the breaking down of vascular tissue. Dr. O. is therefore led to believe that pure iodoform should be used with caution at least in the later stage of uterine epithelioma.

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The rallying motto of a Sectarian name is incapable of exciting to sober, calm, scientific investigation; it only rouses the explosive spirit of accusations of heresy to a fierce, volcanic flame.—HAHNEMANN.

NEW YORK, OCTOBER, 1887.

THE STATE MEDICAL SOCIETY.

THE semi-annual meeting of the New York State Homœopathic Medical Society, which was held in New York, September 20th and 21st, was of more than usual interest. The papers were short but of marked ability, opening a channel of discussion in which each speaker had some practical observations to make, which were presented in a clear, concise and intelligent manner. The gathering was eminently one of practical men discussing those great questions which would naturally come before an association of physicians in that catholic spirit which forms a part of the true physician. The president, Dr. Paine, opened the proceedings with brief reminiscences of some of the men who fought the early battles of homœopathy in this country when abuse and social and professional ostracism were the penalties of even a partial leaning to the doctrines of the New School, and advised, in view of the persecution of the past, the steady growth of the new faith in popular estimation, and the changes it had produced even in the therapeutics of the Old School, and because they had failed to recognize our work, to adhere not only in our societies but also in our professional labors to the name under which so much has been accomplished. But does the name really represent our professional work or can it in justice be applied to our societies as they are at present constituted? The American Institute of Homœopathy, for years after it was established, had but one bureau, that of therapeutics, and all the papers and discussions of the institute centered in this one point. As years passed on and the doors of Old School societies were closed against the investigators of the new faith other bureaus were formed, and what was organized simply for the investigation of a single specialty in therapeutics, to which a special name indicating its work, was entirely appropriate as it would be in any other specialty, became a general society, including all specialties and the whole range of medical investigation. The law required every physician to belong to a county medical society, and as all believers, even in a limited degree, in the new faith were excluded from the old societies new ones became a legal necessity, which at first were solely identified, so far as the homœopathic organizations were concerned, with the study and extension of a distinct specialty in therapeutics. Thus far the name of the speciality to which the deliberations of the society were devoted was perfectly proper, but when in time other topics were introduced and the discussions included all specialties and the whole range of medicine, the name ceased to indicate the true nature of the society or the practice of the individual member. At the recent meeting of the State society papers were read and discussed by specialists in surgery, in gynecology, in opthalmology, in otology and in clinical medicine, which showed a grasp of the great truths of medical literature and an intimate knowledge of a wide range of scientific investigation, which would have done honor to any set of men. These men were not alone specialists and general practitioners but physicians in the largest and broadest sense of the term, limiting their profession not to a single dogma but reaching out eager hands to all the helps science may bring through its hundreds of channels to aid them in their life work.

What the Old School *think and what they do, their threats and their promises* are of but little importance to us as individuals or societies, but it is of the utmost importance to us that we shall stand squarely and honestly before the public

with no other professions for our societies, or ourselves individually, but simply the truth. We ask Dr. Paine, in all sincerity and earnestness, if the term homœopathic represents the real standing of our societies or the individual practice of nine-tenths of their members, and if it does not are we justified simply by the law of right and honesty, which should form the basis of our professional action, in clinging to it instead of that of *physician* which covers the whole field and which needs no explanation? The TIMES has never advocated the giving up our societies or diminishing one iota their efforts in bringing out into the clear light of scientific investigation the practical results for good following an understanding of the principle of similia, which includes a careful study of the physiological action of drugs, but it does advocate a return to the principles of their founders, and a removal of the term homœopathy to its legitimate sphere as a speciality in therapeutics. Our societies are not what they were originally designed to be. They are now organizations for the general study of medicine and should be classified as *New School*, with the homœopathic speciality of therapeutics attached under its proper name as a bureau. Nearly half a century ago a strong antagonism arose in New England against the ultra Calvanistic doctrines of the Congregational church, a church which in all save in government is the same as the Presbyterian and Dutch Reformed churches. Men of a broader, more liberal and advanced ideas of God and of religion started an organization which resulted, without a change of name, in dividing that portion of the theological world into old and new school. The theological seminary of the old school was at New Windsor, under the leadership of Dr. Tyler, and that of the new school at New Haven, under the leadership of Dr. Taylor.

The new school, with its enlightened thought, its advanced philosophy and its spirit of progress, gradually absorbed the old, until in time even the names of old and new schools disappeared from the records of the church.

A similar amalgamation is going on in the medical world, with this exception, the old is absorbing the new, not only culling largely from its medical literature, but introducing its distinctive views into a therapeutics which is rapidly becoming more scientific. The action of drugs are studied from the homœopathic standpoint, and the information thus obtained, and from existing homœopathic literature, utilized to a certain extent in the treatment of disease. As a school we must either absorb or be absorbed. In practice we are catholic; in name sectarian. In practice and in our studies, as was shown by the recent papers and discussions, we recognize no exclusive dogma in medicine, but are thoroughly catholic. With our societies and colleges recognized as New School organizations, with a bureau for the particular investigation of homœopathy or any other speciality, we should stand before the public without need of other explanations than those which could be made with the utmost frankness. Do you not think, Dr. Paine, if we take this position, standing before the world not as bound to the wheels of a single dogma, but with a name which honestly and frankly represents us as precisely what we are, we should absorb instead of being absorbed?

SOME PROFESSIONAL METHODS.

HAHNEMANN'S views of a "sectarian name" published at the head of our editorial columns in the August issue, was read to a professor in an "Homœopathic College," when he exclaimed, "that is from *a traitor in the camp*, just what might be expected from the NEW YORK MEDICAL TIMES!"

Our readers can imagine with what chagrin its source was learned!

This is a fair sample of the foundation of much of the opposition with which the "TIMES" has to battle!

Some of our contemporaries will find sooner or later that their discourteous billingsgate has been as unwarranted as this man's opinion was, and they will be ashamed of their outrageous conduct!

We observe that the sectarian journals are quite silent upon the subject of Hahnemann's opinion of their "sectarian name!"

We hope this is not a fair interpretation of of their sincerity, as followers of one they claim to honor!

The profession should view with alarm the in-

creasing tendency to abusive personality which is rapidly gaining ground in all fields of professional intercourse, and which is surely engendered and fostered by sectarianism!

It is a disgrace which will be regretted when it is too late! But we are asked, "how can it be stopped?" we reply that it can be done only by enforcing that code of ethics which should govern the conduct of all gentlemen! At least one of our national medical societies has founded its code of ethics upon the Golden Rule, but we fail to observe that its members, generally, pay any attention to its precepts!

The manifestations of an irritable temper by harshness, brutality, abuse of another in any way, intemperance in any of its forms, and a variety of other similar qualities, are degrading to any one who is unfortunate enough to possess them uncontrolled, and the sectarian is more likely to possess them than the non-sectarian!

Let the higher sentiment in the profession assert its condemnation of dishonesty wherever it may be found, of incivility under whatever guise, of abusive personality which has no right to intrude itself into the relations of gentlemen in their intercourse with one another, and then we may hope for better things!

Instances of "conduct unbecoming gentlemen" are to be seen on every hand, and in consequence, the general public looks upon the medical profession as composed of anything but gentlemen!

It is quite time that the profession as a body—the whole profession—took this matter in hand and made a code of ethics which would be practical and which could be enforced upon these offenders against decency!

We cannot now see the way in which this can be done, because of the lack of unity, but if the profession is to survive the degradation it has fallen into, the wise heads must devise some plan which will come to the rescue, or it will have descended so low, that there will be no hope!

Mesmer has been avenged by Professor Charcot, if we may believe the statements of a prominent Paris correspondent, and this shows that sooner or later the truth will prevail. It is said that Charcot has publicly admitted the value of hypnotism—which is another name for mesmerism—in the relief of pain, and he has declared that the subject is worthy the attention of scientists! Why not be as just toward Hahnemann? but this will come!

Dr. Luys performed some experiments recently before a jury of scientists in the Paris Academy of Medicine, which were astonishing, to say the least! Well-known drugs were made to show their characteristic effects without coming in contact with any part of the body. Alcohol when placed at the nape of the neck in an hermetically sealed vial, produced the same effect as if drank, and so it was with a great variety of agents! But this result was purely mental, and not because of the actual presence of the drug.

It is said that there is no mental trace of what has happened, when the subject of the experiment has been restored to consciousness—a fact not yet explained.

Mesmer was undoubtedly the originator of hypnotism or animal magnetism over one hundred years ago, and it has ever since borne his name.

His experience with the medical profession of his day was very similar to that of Hahnemann. Both were ostracised as far as they could be, and were obliged respectively to leave their native countries. It is no wonder that they both became sour, and bitterly denounced the medical faculty of their day, for it was human that they should do so! Of course it would have been better could they have done differently, but there are few who can follow the footsteps of the Master, and be satisfied in doing good regardless of persecution!

We may read what Hahnemann thought of Mesmer and his methods in the "Organon," at page 227, *et. seq.*, and this opinion, written nearly one hundred years ago, becomes significant in the light of the developments of the present day!

Of the efficacy of animal magnetism Hahnemann said "none but madmen can entertain a doubt!" Hahnemann claimed, of course, that it should be applied in accordance with his principle of "like cures like," but we have no proof thus far that it acts in this way. It would be a great help if we could find out the principle of selection, and as the subject now seems to have attracted the attention of scientists, perhaps we

may get to the bottom of it, because it is being investigated scientifically.

It is to Hahnemann's credit that he did not taboo animal magnetism as others did in his day.

VEGETABLE PEPSIN.

SOME FEW years since the attention of leading French physiologists was called to the fact that the juice of the *carica papaya* or melon-tree had long been used in Java to make the meat tender. It was found that all parts of the tree, which is also found in South America, contains the vegetable ferment in different proportions, and the juice is extracted from the tree, the leaves and the fruit, most freely from the fruit, but as this cannot always be obtained the leaves are generally used in obtaining the active principle to which has been given the name of *papayotin*. A distinguished German chemist and physiologist says in giving the results of his investigations:

"I have found that *papayotin* has the same general physiological action as pepsine. However, of its own volition, it does more than pepsine, in that it continues its action in the intestines, acting there in the presence of either acid or alkali, and converting into albuminoids five times as much albumen as the best pepsine. Added to this, it has certain distinctive qualities:

"1. It stimulates the peptic glands, increasing the flow of gastric juice.

"2. It commits no harm on the tissues with which it comes in contact.

"3. It has a pronounced antiseptic action, fermentation and decomposition being impossible in its presence.

"4. It has a local action on the unhealthy mucus especially present in gastric catarrh.

"5. It is anodyne in a degree, relieving intestinal pain.

"6. It has been known do dissolve a thousand times its weight of fresh fibrin, and protracted washings will not remove this faculty.

"7. It is readily tolerated by the stomach."

Prof. Finkler, after a careful comparison of pepsine with papayotin, says that the latter shows a more energetic peptonizing power than pepsine, and especially when the proportion of the liquid to the albumen is small.

"Inasmuch as some of the best commercial pepsine will not peptonize more than twenty per cent. of the albumen of the meat, it is patent that papayotin claims superiority as always of one and the same quality.

"Inasmuch as pepsine to achieve its best results, must act only in the presence of a certain amount of liquid, and as it is virtually impossible to create such certain amount, it follows that, as papayotin does not demand any such certain fixation for favorable action, it is of necessity substitutive.

"In point of re-action, pepsine acts in the stomach (where the re-action is acid), but not in the duodenum (where the re-action is alkaline or neutral) and not in the stomach when from disease the same re-action obtains, or when it is highly acid. But where pepsine is of little or no value, papayotin acts without retardation. This action is notable when the contents of the stomach have been rendered artificially neutral or alkaline by the administration of remedies which by their action have combated that of pepsine."

On account of the great digestive properties of the drug it has been recommended and used with a certain amount of success in diphtheria and membranous croup, the membranes being softened and dissolved so that they are easily expectorated. In these cases the papayotin is mixed with one part of water and four of glycerine and applied freely with a brush. As its action is not immediate it cannot be relied upon when asphyxia is present, and in many other cases the disease in its progress outstrips the action of the drug, but there is no doubt from the experiments made that in certain conditions in connection with active treatment the drug may prove very valuable. The papayotin has also been used with good results in fibrous growths in the ear and nose. Administered internally the drug would be likely to prove beneficial, in two grain doses at meals, as a preventative to fermentation and by increasing the strength of the gastric and pancreatic secretions, aid in preparing the food for assimilation, relieving gastric and intestinal pains, the result of what is called dyspepsia. At present the drug is too expensive for general use, the wholesale price being about four cents a grain, and the retail price, of course, nearly twice that amount.

THE RECENT arrival of a steamer in our waters from Mediterranean ports, upon which there had been eight deaths from cholera, with several persons on the sick list, created no alarm

in our city, and need create none throughout the country. The passengers have been landed upon the islands of the Government in the lower bay, and are entirely isolated from all contact with the surrounding world. The steamer and the cargo have been thoroughly disinfected, and there is no danger of the disease being communicated to our city by them; in fact they are as much shut off from our people as they were before they left their home ports. With proper watchfulness at our own gates, such as we now possess, there is but little danger of either cholera or any other pestilential disease being imported among us.

COMPARATIVE MORTALITY.

WE GATHER from a recent contribution of Dr. Bertillon, Chief of the Bureau of Statistics, of Paris, some important facts in reference to the comparative mortality of certain diseases in European cities with the same class of diseases in New York. Dr. Bertillon states that in 1886 there were in Paris in every 100,000 inhabitants a mortality of 45 from typhoid fever, of 17 in London, of 16 in Berlin, of 11 in Vienna, of 113 in St. Petersburg, of 71 in Milan, of 108 in Marseilles, 40 in Lyons, 15 in Edinburgh, 34 in Liverpool, as against 22 in New York. The high death-rate in St. Petersburg, Milan and Marseilles will surprise no one familiar with the topography and life in those cities, but we certainly did not expect to find so low a death-rate in Berlin with its dense population spread out on a vast plain with a river running through its center, with a scarcely perceptable current, or in London with its crowded population and its drinking water none of the purest. Turning to diphtheria, another disease whose prevalence and fatality is supposed to depend to a great extent upon local causes, we find 73 deaths in Paris to the 100,000, 163 in Marseilles, 33 in London, 128 in Berlin, 68 in St. Petersburg, 21 in Liverpool, 32 in Edinburgh, 52 in Rome and 119 in New York. It will be seen in the fatality of the disease New York ranks next to Berlin numbering twice as many deaths as St. Petersburgh and nearly four times as many as London. Consumption, which is supposed to be particularly fatal on the Atlantic coast, really finds less victims in New York than in many of the European cities. In Paris there were 470 deaths from consumption to every 100,000 inhabitants, 664 in Vienna, 448 in Marseilles, 449 in Lyons, 472 in Belfast, 202 in London, 212 in Rome and 376 in New York.

It will be seen that in consumption which is supposed to depend mostly upon other causes than those of a general sanitary character, New York has less mortality than the prominent cities in Europe we have enumerated except Rome and London, while in those contagious and epidemic diseases which are thought to be particularly influenced by local conditions which could easily be controlled by proper sanitary measures and therefore might be classed under the head of preventable diseases, the showing does not compare well and is by no means satisfactory. We are to look for the cause of this, it would seem unnecessary mortality in preventable diseases, to a defective city government; a government with innumerable heads, each with its separate duties and yet so linked together that the responsibility which should center on one is so divided that it centers nowhere and no one can be held responsible. The result is, the citizens fail to get an equivalent for the money paid in taxes. As much as we believe in republican institutions we are decidedly in favor of a one man power in New York, who will be responsible to the people for any wrong doing and for any failure to put in execution the highest plans for the public good. Then and not till then will the element of petty political leaders with their distinct following and arbitrary demands be eliminated from the public service to the public advantage in clean streets, less mortality and diminished taxes.

THE NINTH INTERNATIONAL CONGRESS.

THE Medical Congress whose sessions have recently closed in Washington can hardly be ranked as a success either scientifically, socially or in point of numbers. Any one legally entitled to practice medicine could become a member of the Congress by registering his name and paying into the treasury ten dollars, and as this could be done by letter as well as in person it is difficult to estimate the number actually present.

The number registered was 2,700, of which there could not have been more than 2,500 present during the Congress. The majority of those present was from the Western and Southern States, very few of the profession from the Eastern States putting in an appearance. The men who have figured so largely during the past two decades as teachers and writers both at home and abroad were present in such small numbers that the scientific papers and discussions were with but few exceptions simply a restatement of what had already been published, characterized by no originality and but little if any above mediocrity. Of the long list of vice-presidents read, and which included many names prominent in the profession, only one accepted the invitation to take a seat on the platform.

The number of foreigners present was 150, which was certainly not a large representation of the medical world outside of the United States. The list contained many prominent names, but a majority of those best known all over the world was not present. We missed such names as Paget, and Gull, and Pasteur, and Esmarch, and Verneuil, and Virchow, and Lister and Neudörfer who were present at previous congresses and who certainly would not have been detained from attending this by a voyage across the Atlantic. The simple reason for the partial failure of the Congress was the disgust felt for the spirit which dominated the American Medical Association at New Orleans, a spirit so narrow and selfish as to rouse into active force the antagonism of some of the ablest minds in the profession. As illustrating the estimate placed upon the Congress by foreign visitors, Dr. Mariano Semmola, Professor of Therapeutics in the University of Naples, Italy, and a member of the National Senate, said that he had seen but few of the Americans he had expected to see, that he was not favorably impressed with the social aspects of the Congress, and that in scientific value it was very markedly below the average of any of its predecessors. Perhaps it is worthy of note that notwithstanding the Congress was open to all schools the members of the New School were carefully excluded from the committees, and yet it devolved upon Secretary Bayard, the nephew of the genial Dr. Bayard of this city, and one of the most outspoken homœopaths in Washington, to deliver the address of welcome. We have not deemed the proceedings of the Congress of sufficient value to make anything more than short extracts, referring those of our readers who wish a minute report, to the *Medical Record* and the *Medical Register*, to both of which we are indebted for a very full and carefully prepared abstract of the proceedings.

NUTRIMENT IN BREAD.—The appliances of science in reducing the wheat or rye berry to flour gets rid of all the inert substances and saves all the nutrition contained in the berry. The wheat berry has five coats, the three outer ones containing no nutrition, but the fourth and fifth are rich in gluten, and the starch in the last coat mingles freely with the albuminoid cells. The bran in the present improved process of manufacturing flour contains simply the woody fibre and is not nutritious, all the nutriment being retained in the white flour. Bran bread is valuable mostly for its mechanical or irritative action upon the bowels. The white flour contains in reality a much larger percentage of the phosphates and gluten than the unbolted flour, although the latter may be serviceable as a laxative.

BIBLIOGRAPHICAL.

A CYCLOPÆDIA OF DRUG PATHOGENESY. Issued under the auspices of the British Homœopathic Society and the American Institute of Homœopathy. Edited by Richard Hughes. M. D., J. P. Dake, M. D., *et al.* Part V. Cantharis—Chromium; pp. 192. Part VI. Chromium—Conium.

With part V. begins the second volume of this stupendous undertaking! Whether it will repay the effort, remains to be seen, but the editors who are doing the work, deserve credit for their ambition to say the least, and should have all the encouragement we can give them. We can reiterate here what we have before said of the work, and we judge from the fact that the parts continue to appear, that the subscriptions still come in, thus showing that the subscribers are sufficiently satisfied to pay their money.

THE PRINCIPLES OF ANTISEPTIC METHODS APPLIED TO OBSTETRIC PRACTICE. By Dr. Paul Bar, Accoucheur to, formerly Interne in, the Maternity Hospital, Paris, etc. Translated by Henry D. Fry, M. D. Philadelphia, P. Blakiston, Son & Co., 1887; pp. 175, octavo.

The subject of antiseptics is now being universally studied in connection with all branches of medicine and

surgery, and there is no more important field for this study than is presented in the lying-in-room.

While the author of this work is an enthusiastic advocate of the employment of antiseptics in this new department of usefulness, his teachings are conservative, and precise indications guide him in practice. The various antiseptic procedures adopted in some of the principal institutions abroad are described, and the whole forms a most interesting and practical *brochure* for such as desire the *modus operandi* of antiseptic methods at the present day.

DeWitt's Surgeon's Vade Mecum. A Manual of Modern Surgery. Edited by Stanley Boyd, M. B., B. S. Lond., F. R. C. S., Eng., Assistant Surgeon and Pathologist to the Charing Cross Hospital and Surgeon to the Paddington Green Hospital for Children; late Demonstrator of Anatomy in University College, and Surgical Registrar in University College Hospital. Twelfth Edition, with three hundred and seventy-three wood engravings. Philadelphia, Lea Brothers & Co., 1887; pp. 985.

If we may judge a work by the number of editions which have been called for, we should say that this has met a popular demand.

It is stated that fifty thousand copies have been sold in England alone, and in this country the number must be gigantic, as the Government issued a copy to each surgeon serving in the late war! Few works have been more widely known or better appreciated.

The present edition differs from the others by having been almost completely re-written.

The scope and character of the work is too well-known to require further review, and we need only say that the text brings the subject down to date.

American Medicinal Plants. An illustrated and descriptive guide to the American plants used as homœopathic remedies, their history, preparation, chemistry and physiological effects. By Charles F. Millspaugh, M. D.; illustrated by the author. Boericke & Tafel, publishers.

Fascicle VI. completing the work contains Nos. 26 to 30, and includes æthusa, anthemis nobilis, cannabis, dioscorea, epilobium, erechthites, erigeron, eryngium, euphrasia, fraxinus, gnaphalium, hedeoma, helleborus viridis, hyoscyamus, lamium, rumex lapathum, lobelia cardinalis, lycopodium, mentha piperita, nabulus, prinos, raphanus, sambucus canadensis, scutellaria, spigelia, stillingia, tanacetum, urtica urens, uva-ursi.

We have said so much in praise of this work in its progress through the press that it is only necessary to state now that Fascicle VI., in its literary, scientific, artistic and typographical work is fully equal to those which have preceded. The entire work forms one of the most valuable contributions to the literature of the New School yet presented to the public.

Cyclopædia of Obstetrics and Gynecology. Wm. Wood & Co.

Vol. VI. of the Cyclopædia is a handbook of general and operative gynecology, by Dr. A. Hegar, Professor in the University of Freiburg and Dr. A. Kattenbach, Professor in the University of Giesson; edited by Egbert H. Grandin, M. D., Obstetrical Surgeon to the New York Maternity Hospital. Volume I. is devoted to gynecological examinations in which is given the steps needed to reach an intelligent diagnosis in the various conditions requiring the gynecologist's skill. Illustrations of the various positions and instruments are given in a concise and intelligent manner, and the differential diagnosis clearly stated. Part II. is devoted to general and operative gynecology, with illustrations of the instruments used and the various operations. The high standing of both authors and editor is a sufficient guarantee of the excellence of their united work.

Volume Eight of the Index Catalogue of the Library of the Surgeon-General's Office, United States Army, Under the editorship of Dr. John S. Billings, extends from Legeci to Medicini, including 5,307 volumes and 13,205 pamphlets. It also includes 12,642 subject-titles of separate books and pamphlets and 24,174 of articles in periodicals.

The *Cosmopolitan Magazine* for September contains a full page engraving of Sumner and Longfellow, and in reminiscences of Sumner gives his process of brewing tea so as to bring out to the fullest extent its aroma and delicate flavor. The water was boiled on the table and the tea placed dry in a cup which had been previously heated with boiling water from the urn; a teaspoon which stood in the cup when the boiling water was poured in remained in the cup; then boiling water was drawn from the urn on to the tea and a saucer inverted over the top of the cup for a few moments, when the tea was ready to drink. The story of a French marriage is one of the most exquisite pieces of character painting we have seen. In a very readable article upon "How the Persians Live;" the writer speaks of a wine, the Shiraz but very little known out of Persia, not by any means expensive, and yet with a delicate and fine flavor all its own, and unlike any other. Every European connoisseur who puts his lips to this wine at once declares it incomparable. If the statement of the writer is true, we would suggest to Mr. Reich, who has linked his name to immortality with his Tokay, to place the American people under still greater obligations to him, by making them familiar with the Persian Shiraz, to which it is said the Persians owe so much of their poetic nature.

The Century for September. *Butter vs. Oleomargarine.*

The following is quoted from Professor Atwater's article on "The Digestibility of Food:" "Much has been said and written about the relative digestibility of butter and oleomargarine. The only actual comparative tests on record are a series made with a man and a boy by Professor Mayer, in Holland. In these from 97.7 to 98.4 per cent. of the fat of the butter and from 96.1 to 96.3 per cent. of the fat of the oleomargarine were digested The average difference was 1.6 per cent. in favor of the butter. Certain possible sources of error in such experiments make it a question whether the digestion was not in fact more nearly complete than even these figures make it. An interesting series of experiments in artificial digestion conducted by Dr. R. D. Clark, in behalf of the New York Dairy Commission, though of course not affording a definite measure of the process as it actually goes on in the body, accords with the very natural supposition that, in ease, and perhaps in completeness of digestion, oleomargarine would rank between butter and the fat of ordinary meat.

"In chemical composition oleomargarine stands between

meat-fat and butter. It will be remembered that oleomargarine is made from beef-fat and lard by removing from them part of the stearin, which counts as the least digestible ingredient, and adding a little butter and sometimes oil, as cotton-seed oil. The bulk of all these fatty substances, meat-fat, butter and oil, consists of the same or nearly the same kinds of fat, the meat-fat having the more stearin. The butter, however, contains small quantities, seven per cent. or thereabouts, of peculiar fats, butyrin, caproin, etc., which give it its flavor and which are thought by some to make it more easily digestible, especially by persons whose digestion is enfeebled by lack of digestive juices or otherwise.

"In the excitement over oleomargarine legislation, the discussion of the relative digestibility of butter and butter substitutes has been made very active by the importance of its bearing upon their comparative values for nutriment, and many statements have been made as to the effect of the chemical composition of the peculiar butter-fats and the consequent chemical changes in the process of digestion and assimilation in the body. It is interesting to compare the very positive inferences which some writers upon the subject draw from experimental invsstigations, with the very guarded expressions of opinion made by the authors of the same investigations in their writings and in personal conversation. The facts at hand and the general impression of special students of these subjects, so far as I have observed, are to the effect that probably, for healthy persons, the difference between butter and oleomargarine in ease and in completeness of digestion would be at most very slight, but that for people with enfeebled digestion and for infants, butter may, perhaps, at times, have the advantage."

Fowler & Wells, 775 Broadway, have published a large and beautiful lithograph of the sympathetic nerve, drawn and colored from nature by I. B. Lévillé, of Paris, in which the general relations of the sympathetic nerve system is given. A concise description of the nerve and its connections accompanies the plate. Students and physicians will find the plate a valuable aid in the study of nervous affections.

The *Century* will publish a series of papers, which cannot fail to be interesting, on Siberia and the Exile System.

CORRESPONDENCE.

A PECULIAR CASE OF DEFECTIVE CEREBRATION.

Cases of this peculiar abnormality are numerous in the present state of mental development, so numerous, in fact that the occurrence of a fresh instance of it should excite no surprise and call for no special commentary. But the case to which we are about to call attention is of so aggravated a type, and involves so many elements of mental perversion, memory, honesty, veracity, as well as the logical faculty—or the power to draw correct conclusions from given data—that we cannot but regard it as worthy of brief notice—since it may serve to point a moral.

The case to which we refer may be found illustrated in an editorial in the last (September) number of the *Hahnemannian Monthly*. The editor, unmindful alike of the utterances of previous editors of that journal and the policy of its projectors and founders—all of whom were older if not wiser than is he—unmindful, also, of his duty as an editor, the obligations of truth and candor—undertakes to define its position in respect of New School problems, and favorably to contrast it with that which he falsely presumes to be held by THE NEW YORK MEDICAL TIMES. A more inane exhibition of ignorance and sophistry is rarely to be found in the annals of medical controversy. We are familiar with the medical sentiments of the *Hahnemannian Monthly* as we are with those of the TIMES. We know something of the history and progress of homœopathy in the United States, and of the aims and objects sought in the establishment of the first Homœopathic Medical College; had personal acquaintance with the founders of its organ, the *Hahnemannian Monthly*, and the objects which they had in view in its establisment. For years it was the avowed organ of the Hahnemann Medical College, at Philadelphia, and for years it advocated the homœopathy of Hahnemann, under the leadership of the venerable Hering and Lippe. If Hahnemann had vagaries as to infinitessimals, potentiation, dosage, the universality of the homœopathic law of cure, etc., so had the *Hahnemannian Monthly*. If Hahnemann deprecated any departure in practice in any case, non-surgical, from the strict application of his method, so did the *Hahnemannian Monthly*. The therapeutics taught at the college was true to the therapeutics of Hahnemann; and the editors of the *Monthly* distinctly announced that the professors of the college were chosen with especial reference to their fitness to teach and promulgate the doctrines of disease, dosage and remedy "as promulgated and taught by Hahnemann," and to practice "in accordance with them," to the end that "in the daily clinics where Hahnemann's precepts were strictly followed," the students might be "eye-witnesses of the good results" of these precepts. (See introductory to Vol. III., *Hahnemannian Monthly*, August, 1867.) And in this same volume of the *Hahnemannian Monthly* (p. 289) is an article entitled "True and Delusive Homœopathy," by one of its editors, the learned and conscientious Lippe, in which translations from Hahnemann's later writings are given, re-affirming and re-emphasizing every tenet of his system and the authority of the master over the conscience and practice of those who pretend to be his followers. Homœopathy, in Hahnemann's view, was "the only true system of healing," from the method of which no faithful disciple of his should in anywise depart. So thought and so taught the *Hahnemannian Monthly*, down to within a recent period; and it has denounced as mongrel the luckless follower who has had the temerity to depart in any way, under any circumstances, from the master's precepts.

Now, its present leading editor writes flippantly of "Non-homœopathic cures," the propriety of teaching students other means and methods of curing disease than those promulgated by Hahnemann, and insists that homœopathy, acting upon the intention of the founders of the Hahnemann Medical College of Philadelphia, must assume "the stewardship of all medicine!" With equal sense, or want of sense, might he insist that the tail of a dog should wag its body! Shades of Hahnemann! Is the man mad? or is it a spasmodic attempt of a Hahnemannian to rise to the level of a physician?

The custodian of all Medicine! Thanks. There *is* something, then, outside the confines of homœopathic therapeutics which the editor considers to be worth knowing, and homœopathy is no longer the only true system of healing as claimed by this editor's master, and formerly by the *Hahnemannian Monthly* itself. It was this concession on

the part of the editor of the *Hahnemannian Monthly* that led us to congratulate ourselves on the evidence of medical progress which we thought we had discovered within the ranks of the New School. We hope we were not premature.

Moreover, strange to say, this same editor, he who writes of assuming the stewardship of all medicine in the name of homœopathy, while claiming progress himself, which we would feign admit, accuses THE NEW YORK MEDICAL TIMES of retrogressive tendencies. To sustain this fallacy he falsifies the sentiments and teachings of this journal in almost every particular. His logic is peculiarly fatuitous, so much so, as to indicate some disorder of his cortical substance. We will not undertake to expose in detail his fallacies or to dispute his conclusions. It would not be worth the ink. But we will thank the gentleman of the *Hahnemannian Monthly* kindly to point out one single, well-defined, settled truth or principle of Homœopathy, which ever was or is now ignored by THE NEW YORK MEDICAL TIMES. *

SOCIETIES.

NINTH INTERNATIONAL MEDICAL CONGRESS.*

Held in Washington, D. C., September 5, 6, 7, 8, 9 and 10, 1887.

Nathan Smith Davis, M. D., LL. D., of Chicago, Ill., Presiding.

SECRETARY GENERAL.—John B. Hamilton, M. D., Washington, D. C.

The Address of the President of the Congress.

President Davis said in part:—The living human body the chief object of your solicitude, not only combines in itself the greatest number of elementary substances and the most numerous organs and varied functions, so attuned to harmonious action as to illustrate the operation of every law of physics, every known force in nature, and every step in the development of living matter from the simple aggregation of protoplasm constituting the germinal cell to the full-grown man, but it is placed in appreciable and important relations with the material objects and immaterial forces existing in the world in which he lives.

Hence a complete study of the living man, in health and disease, involves a thorough study, not only of his structure and functions, but more or less of every element and force entering into the earth, the air, and the water, with which he stands in constant relation.

The medical science of to-day, therefore, embraces not only a knowledge of the living man, but also of such facts, principles, and materials gathered from every other department of human knowledge as may increase your resources for preventing or alleviating his suffering and of prolonging his life.

The time has been when medical studies embraced little less than the fanciful theories and arbitrary dogmas of a few leading minds, each of which became for the time the founder of a sect or so-called school of medicine, with his disciples more or less numerous. But with the development of general and analytical chemistry, of the several departments of natural science, of a more practical knowledge of physics, and the adoption of inductive processes of reasoning, the age of theoretical dogmas and of medical sects blindly following some more plausible leader passed away, leaving but an *infinitesimal* shadow yet visible on the medical horizon.

* An abstract from the *Medical Record*.

The address closed with an appeal for the collective investigation of the phenomena of disease.

DR. DOMINIGOS FREIRE, of Rio de Janeiro, Brazil, read a paper on

Vaccination in Yellow Fever,

the tenor of which was that the disease can be prevented by inoculation with attenuated virus.

DR. FREIRE stated that in families of ten and fifteen members, living in *one hut*, if vaccination was practised after the outbreak of the fever among the members not yet affected, that this arrested the further progress of the scourge; whereas, where it was not practised they all were stricken down with the fever and many, if not all, died.

Penetrating Gunshot Wounds of the Abdomen,

elicited a very interesting discussion, in which Dr. THOMAS G. MORTON took a prominent part.

The abdomen should always be opened under the strictest antisepsis; through its potent aid the operation is attended with little danger. In cases of stab wounds of the abdomen, with perforation of the peritoneum, I would advise making an incision sufficiently large to enable the surgeon to clearly see what he is doing, and, having secured any bleeding vessels, to wash out the cavity with a warm solution of bichloride of mercury, a $\frac{1}{10000}$, (!) until the water returns perfectly clear, and then sew the wound in the usual way. I prefer, in the great majority of cases, to make the incision over the middle line, except in perityphlitic abscess, when I make a curvilinear incision over the most prominent parts of the abscess. My experience has taught me that a large incision is better than a small one, and safer in every respect. For a gunshot wound, I proceed in the same manner. In a boy seventeen years of age, with a penetration of the transverse colon, and a young negro with a similar injury, upon whom I lately performed this operation, the temperature did not exceed 101° and 102°, respectively, and this for the first day only, recovery being perfect and rapid in both cases.

Treatment of Phthisis, More Particularly that by Intra-Pulmonary Injection.

R. SINGLETON SMITH, M. D., said that in consequence of the proved utility of iodoform in chest disease, as shown by a steadily increasing mass of evidence since its first introduction for this purpose by Professor Semmola, in 1878, and supported by a series of cases presented to the International Congress of 1884, in which the author found increase of weight, improved appetite, diminution of temperature, and general improvement, under the administration of iodoform given by the alimentary canal, it was thought that iodoform would be the best substance to employ for injection into the parenchyma of the lung. The clinical utility of iodoform being the ground on which its use for this purpose has been founded, the evidence is not shaken by any statistics as to the comparatively feeble powers of the drug as a germicide.

It is true that if iodoform be of use, as the clinical evidence indicates, then it is likely to be of far greater utility when injected, even in small quantity, into the focus of a diseased patch than when given in larger doses diffused throughout the whole body. Such injections have been shown to be not especially hazardous. Even the cases in which pleuritis has occurred had recovered completely from the attack in the course of a few days, and possibly the pleuritis was due to the failure of the fluid to pass beyond the pleural cavity into the lung-substance.

DR. CARNOCHAN, of New York, presented a remarkable specimen of

Bony Union of the Neck of the Femur Within the Capsule,

after fracture, occurring in a woman seventy years of age. She was kept in her fracture-bed for nine months, rest being the method of treatment. The value of this specimen was very great, especially in courts of law.

DR. JOHN BARTLETT presented

A Study of Deventer's Method of Delivery of the After-Coming Head,

supplementing the paper with a demonstration upon the phantom.

Deventer spoke in the most confident manner of the success and safety of podalic version, and of the ease with which the head could be delivered, but did not describe his method, which, however, Dr. Bartlett had found mentioned in Smellie's work. Deventer's method was shown to consist of a reversal of the so-called Prague method, in that the body of the child was carried far backward toward the perineum, with the view of turning the occiput out from under the pubes, the anterior surface of the neck resting on the perineum. At the beginning the occiput of the child was turned forward, so as to come under the pubis as the child was drawn down. The arms were *not* to be drawn down, but left up alongside the head, being placed so as to come anterior to either parietal base. The delivery by traction backward upon the body was to be aided by pressure made immediately above the pubes, the wedge formed by the head and arms being decomposed by the withdrawal of the larger transverse diameter of the head from between the arms, as descent of the head accompanied by extension occurs. The mechanism was only favorable when the occiput was anterior. Deventer never lost a child or tore a mother. The arms being left up, protected the neck of the child and allowed a passage for the cord alongside of them, so that haste was not as necessary as with ordinary methods, and occupying a broad and yielding part of the pelvis, they did not obstruct delivery.

DR. H. WATRASZEWSKI, on the

Treatment of Syphilis by Injection of Insoluble Mercuric Salts.

Cases come to the special hospital for syphilis with which he is connected, from all parts of Poland, having been treated by other methods. Some have the disease in its worst forms, and present all the conditions favorable for a thorough test of this treatment. The author has had results follow the injection-cure which are very favorable, and warrant his enthusiasm. The feature of the method is the small number of injections required, twelve to twenty being required for a course of treatment, and only four or five to cause a disappearance of the lesions at any time present.

Once each week a Pravaz syringeful of the following solution is to be injected deeply into the tissues:

℞. Hydrargyri oxyd. flav... 1.0 gram.
Gummi arab..... 0.25 centigram.
Aquæ destillat..... 30.0 grams.

M. S.—Shake and inject.

A Pravaz syringeful represents about four centigrams, or two-thirds of a grain.

The Treatment of Neuralgia.

DR. CREGO did not like to hear that Dr. Ellott prescribed so much morphia in the treatment of neuralgia. It is the duty of physicians to use as little morphia as possible. Arsenic and iron should be prescribed and electricity be used as often as practicable.

DR. DUQUET thought well of the hypodermic injections of chloroform in sciatica. Injections of twenty drops very deeply into the muscles, just at the beginning of an attack, he had found of great value. He did not share in Dr. Crego's sweeping denunciation of morphia.

DR. HEBER ELLIS thought highly of hydrochlorate of ammonia, which he said had been used with success in Germany, and which he had himself found valuable He could not so highly recommend quinine. He had seen cases of chronic deafness result from its constant use.

DR. GIRSTROM, of Sweden, had found massage of great value in the treatment of neuralgia.

DR. BROWER, of Chicago, discouraged the indiscriminate use of morphia and quinine. He had seen too many morphia *habitués*, whose habit had commenced in this way, not to feel like protesting against their too frequent use. You obtain a great amount of *éclat* for instantly relieving your patient, but you do him, in many cases, far more harm in the long run than good.

DR. CLARK, of Toronto, said he took good care when prescribing morphia, in all cases, to conceal from the patient the fact that he was giving him morphia. Many times when prescribing it internally, he gave it with some medicines of such nauseating bitterness that the patient was rarely inclined to ask for its like again. He believed that the treatment of neuralgia should depend upon the causes of the disease.

DR. ANDREWS recommended the use of cod-liver oil in the treatment of chronic neuralgia. In an emulsion adding the phosphites, iron, arsenic and other tonics, it was excellent. The use of the hot-water bag, too, was very useful.

PROFESSOR MENDEL maintained that the term **Moral Insanity** should be striken from the nomenclature of mental diseases. Mental imbecility or paranoia, or something more tangible, should be adopted.

DR. HUGHES did not question the existence of moral insanity, as described by Pritchard. He would substitute for the term moral insanity, because of the difficulty encountered in explaining its meaning in courts of law—"a state of imbecility associated with congenital mental defect."

DR. DOWN said that in his experience in London hospitals he had come to the conclusion that nearly all cases of locomotor ataxy were of syphilitic character, that they all responded to specific treatment, and that they are, as a rule, syphilitic.

Uniformity of the Reports of Sick and Wounded in all the Armies of the World.

DR. HAMILTON further reported as having been adopted by the Section in Public and International Hygiene, the following preamble and resolution:

Whereas, The whole community has been shocked by the almost daily occurrence of terrible accidents on many of the railroads, causing considerable loss of life, and by the habitual neglect of the most elementary sanitary laws

Whereas, As this Section considers itself in a degree the guardian of public health; be it

Resolved, That the attention of this Ninth International Medical Congress be respectfully called to this most important question, and that it be requested to use its influence to obtain the necessary reforms.

DR. GEORGE E. FELL read a paper on

Forced Artificial Respiration in Opium-Poisoning, its Possibilities, and the Apparatus Best Adapted to Produce it.

In one of the latest extensive works, we find that artificial

respiration has a wider range of application than might at first be supposed. It has been used in drowning, strangling, occlusion of the air-passages, hemorrhage, and poisoning from anæsthetics and the various alkaloids. Those methods depending upon the movement of the limbs and body for their success have been usually supplemented with pressure by the physician. In the physiological laboratories experiments are performed, in which the trachea is opened to supply the air for respiration by means of bellows. The insertion of laryngeal tubes aiding in artificial respiration is worthy of consideration.

I have applied the term *forced respiration* to those cases in which the trachea is opened, to distinguish it from the ordinary artificial respiration. After extended inquiries, I have never heard of a case in which forced respiration has been used upon the human subject in opium-poisoning. On July 23, 1887, I was called to see a severe case of opium-poisoning, which, after the ordinary course of treatment, I finally gave up to die. Dr. F. R. Campbell was summoned to the case, at which time we found the respirations only one per minute: the pulse was still to be detected at the wrist Atropine was at this time administered hypodermically, which soon resulted in a dilatation of the pupils.

Having frequently performed the operation of forced respiration on animals, I suggested the advisability of trying this upon our patient, to which Dr. Campbell acquiesced. The apparatus which I possessed for this purpose was immediately sent for. The operation of laryngotomy was made, the tube inserted, and forced respiration produced.

The pulse soon became stronger and more regular, and in twenty to thirty minutes the respirations themselves began. In three hours the respirations had increased from one to twenty per minute. In twenty-four hours they again went down to six per minute. It was also interesting to notice that after being resuscitated he was taken with an attack of delirium tremens, in which he was maniacal, but from which he soon recovered. He had been drinking very heavily before taking the opiate. There was no injury of the lung-tissue. The original instrument was shown, as well as the improvements made adapting it for use on the human subject.

Dr. George Assaky on

Iodol in Surgery.

The conclusions arrived at were: (1) Wounds unite under l'iodol by first intention. This union, however, being the result of various and complex conditions attending operation, it is not possible to attribute to l'iodol alone the absence of suppuration and inflammatory conditions. In wounds which gap and suppurate l'iodol is an excellent antiseptic. It rapidly retards suppuration, renders it inodorous, reduces the frequency of dressing, and hastens considerably cicatrization. In ulcerating or gangrenous wounds l'iodol aids to resist the destructive process, and changes the wound, after a variable time, to a healthy, granulating condition. This action of l'iodol extends itself to hard chancres. In case of soft chancres the result is variable. Sometimes it transforms them into a simple wound with brief delay; at others it is insufficient for this purpose, and it becomes necessary to employ in addition, locally, antiseptic lotions.

The same is true with reference to open venereal bubos of the groin. The powdered l'iodol has this advantage over iodoform, that it is free from odor and is not toxic in its effects.

(2) Doses of l'iodol of from 0.40 centigrammes to 2.0 grammes, daily, produce no functional trouble, even if continued a long time.

Dr. Carnochan, of New York, presented a specimen of

Double Dislocation of the Hip-Joint.

He remarked that previous to 1820 this condition was unknown, but in 1826 Dupuytren first brought it to the notice of the profession. The speaker stated there were various theories as to the causation of this condition, among which were carelessness of the accoucheur, movement of the fœtus in utero, etc.; the question arises, also, as to whether it is really a dislocation or malformation.

Dr. Link on

Alcohol as an Anæsthetic.

The speaker had used it in over a hundred cases and never had a fatal result, while the anæsthesia was complete. The whiskey to be given in two-ounce doses, every two to five minutes, until a pint to one and a half pints had been taken and the patient became stupefied. Then about two drachms of cholroform were placed in the cone, and a few respirations would put him to sleep; the operation could then be carried out. The speaker's reasons for using this method was that in cases of shock there is depression; the alcohol increases the heart's action, while the chloroform, which is a depressant administered as stated, secures the equilibrium of the heart's action.

Dr. Ira E. Oatman on the

Treatment of Puerperal Eclampsia.

After giving a sketch of the disease and the usual methods of treatment, he recommended: When the convulsions occurred before labor, anæsthesia and clearance of bowels and rectum, together with as rapid delivery as was compatible with the safety of the patient. When the convulsions occurred after delivery and were accompanied by high, nervous and vascular tension nothing was so safe, speedy and reliable as veratrum viride. This he gave in the dose of ♏vj. by mouth, or ♏x. by rectum, repeated every fifteen minutes until the convulsions ceased.

Should the veratrum cause excessive depression, an immediate and certain antidote was found in alcohol. It was better to give the veratrum in excessive doses than to risk the continuance of the convulsions, for the brandy or whiskey to counteract its effect were always present, and the veratrum certainly exhibited a remedial action not otherwise attainable. The puerperal period was to be treated as usual, together with treatment of any pathological condition present He found the veratrum equally efficient in the convulsions of children and in hysteroepilepsy.

Dr. W. W. Jaggard, of Chicago, called attention to the following propositions:

1. Late ligature of the cord is always indicated in the interest of the child—when not contra-indicated in the concrete case. The researches of Budin have demonstrated that when the cord is ligatured when it ceases to pulsate the child receives seventy-five grammes of blood—lost when the pulsating cord is tied. The relation of late ligature of the cord to the preventation of post-partum hemorrhage, to which the gentleman from Michigan has called attention, is of great interest, if it be a fact.

2. The best preventive of post-partum hemorrhage is to secure retraction of the uterus, by keeping the hand on the fundus uteri from the moment the child begins to pass through the vulvar outlet until the muscular fibres have rearranged themselves—about one hour after expulsion of the placenta.

XUM

Kucher, in his admirable book, has called attention to friction over the fundas twice daily during the first two days of the puerperium. This is the practice in Vienna. There is little danger of dislodgment of a clot in the uterine sinuses, or interruption of the process of puerperal thrombosis, by this procedure. It is also an excellent prophylactic against resorption of septic matter.

DR. MURRELL, of London, England, referred to his discovery of the usefulness of nitrite of amyl in the condition of angina pectoris, and he has always advised patients to carry the medicine in a small bottle. The pearls he considered too expensive for use. The tabellæ (Ch. B.) of nitro-glycerine, made with chocolate, he considered dangerous from their resemblance to confections. He has used nitro-glycerine in one per cent. solution (dose ♏. v-xv) in cases of neuralgia of the fifth nerve, surgical shock, asthma (spasmodic and cardiac), and reflex neuroses. He preferred this in epilepsy to the nitrite of sodium, which had been recommended by Dr. Law. In angina, patients can take fifteen minims when they feel the attack coming on; such patients should carry a small bottle with them for immediate use when they feel the attack coming on, otherwise they might perish before the agent could be obtained.

On the Poison of Cobra,

by DR. JULIUS GNEZDA. The substance upon which the experiments were made was brought from India by Dr. Robert Koch. It was obtained by making the cobras strike some shells covered by sheepskin. The poison was afterward dried. It is soluble in water, but not in alcohol or ether; its activity is lost by boiling. It is uniformly poisonous to higher animals. The European hedgehog and the ordinary swine of this country are popularly believed to enjoy an immunity, but this is explained by mechanical obstacles to absorption in these cases. The poison is contained in an albuminous fluid, but its chemical construction is not as yet settled. It is poisonous when applied to mucous surfaces, without causing blisters.

The effect is very marked when the poison is injected into the circulation. The blood-pressure is at first increased, the blood-corpuscles are changed in their shape, and the spectrum of the blood is characteristic. It was found that death did not occur at once, but after about half an hour and as the result of failure of respiration, so that the Indian Government was induced to recommend artificial respiration in such cases. At present, no antidote is generally accepted. Since it is not known whether the poison is an alkaloid, a ptomaine, or other body, such a question is at present only a speculation. As it is secreted by salivary glands, it is probably an albuminous body.

DR. L. LEWIN, of Berlin, read a paper

On the Maximal Doses of Drugs.

Of the many difficulties which pharmacotherapy has to strive against, the dosage of medicine is by no means the least. Variation in dose arises (1) from the differences.

(*a*) between one person and another; (*b*) between single individuals at different times; (*c*) between the intensity of the disease in men suffering with the same affection; (*d*) between diseases in which the same drug is used. (2) From the variability in the activity of the greater part of our remedies.

At the same time it is possible and desirable to establish the usual dose of agents which are active in relatively small quantity, and which readily produce toxic effects when the dose is increased. Two groups of preparations fall under this head: (1) Plants (crude) and plant-products, and their pharmaceutical representatives; and (2) chemical substances such as metalloids, metallic salts and carbon-compounds.

The first group is almost universally inconstant in its effects, and thus far an international agreement as to their maximal doses has not been possible. The remedies of the second group, on the contrary, are nearly uniform, and the doses beyond which they cannot be given without danger can be determined by physiological experiment; but although the basis for such agreement is tolerably broad, yet the statements given in different pharmacopœias in many cases vary greatly. Such variation can be easily explained in the case of the first group, but becomes incomprehensible in the second.

From the results of his own observation and a comparison of the most of the pharmacopœias which give maximal doses, the author had constructed a table of the ordinary maximal doses of many of the drugs belonging to the second group, which he appended to this communication. Such a list should be added to the pharmacopœias of such countries as have no maximal dosage, for the convenience of the practitioner, who thus would be enabled to prescribe such drugs with confidence even if they should not be generally used in his own country. From this Congress he hoped the influence would go out which would make such an international agreement possible.

DR. DEWITT CLINTON WADE on a

Formula for Officinal Dilute Hydrobromic Acid (U. S. P.).

He recommends the following for making a standard ten per cent.:

Bromide of potassium, four (*Avoir.*) ounces; tartaric acid, five (*Avoir.*) ounces; water, seven (fluid) ounces. Dissolve the salt in the water and add the acid. When thoroughly mixed set aside in the cold for the precipitation of the acid tartrate of potassium. Decant the supernatant fluid and dilute with sixteen fluid ounces of water. The result is a ten per cent. solution, by weight, of hydrobromic acid.

DR. JUSTUS ANDEER read a paper on

Resorcin and its Preparations.

In this paper the author briefly gave the result of ten year's experience with pure resorcin. He had found it non-toxic, antiseptic and possessing many advantages over carbolic acid, being free from odor and non-corrosive to the skin. He had obtained excellent results from it in eczema, in keloid and in parasitic skin diseases, as well as diseases of mucous membranes. In the form of keratine-coated pills, it can be given for bronchitis, or in combination with castor-oil (one to two per cent.) for diarrhœa and dysentery. For local use it may be combined with cacao-butter as a salve, or it may be made up into a soap of varying strength, from one per cent. up. Failure to obtain satisfactory results from its use may arise from not using a chemically pure resorcin, or from giving it in insufficient doses.

DR. J. E. STEWART* read

"A Proposed Investigation of the Materia Medica of the World by the Government of the United States.—A Plan to Promote Progress in the Science of Drugs."

First. The manufacture and sale of medicines is being diverted from its legitimate channels and directed into the

*Medical Register.

hands of uneducated drug merchants, ignorant alike of disease and its treatment.

Second. The pharmaceutical profession, who suffer much through this competition, are, to no small degree, usurping the prerogative of the medical profession, whose province it is to treat the sick. This has caused a feeling of extreme jealousy between the two professions.

Third. Though the large manufacturing houses are turning out elegant goods, they keep the processes for preparing them secret, and medical science suffers in consequence.

Fourth. Pharmacopœias and text books are suffering for want of this publication.

Fifth. Students of medicine are uninstructed in the knowledge of the agents they are afterwards to prescribe on account of it.

Sixth. How can pharmacopœias and text books be founded on such a basis as this, when the names of medicines are unsuited to scientific nomenclature and the knowledge of their preparations is a thing of secresy.

Seventh. If the knowledge of drugs is to be a science it must be classified in scientific form and protected by a changeless nomenclature. This is impossible under the circumstances.

Eighth. Physicians who use these agents do not report the results as they should do to establish their value as remedies.

Ninth. Medical editors are loath to say anything against the manufacturing houses who are their advertising patrons and who help support their journals.

Tenth. The manufacturers are twisting the patent and trade-mark laws to obtain a protection never contemplated by Congress when these laws were passed, and contrary to their spirit.

SOME NOTES FROM THE PROCEEDINGS OF THE "ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE."*

ECONOMICS IN FOOD

A whole day was devoted in Section I (Economic Science and Statistics) to the two papers of Professor W. O. Atwater, of Wesleyan University, Middletown, Conn. The main points urged in the morning address on "Economy of Food" may be briefly recapitulated as follows:

"The cheapest food is that which furnishes the actually nutritive materials at the least cost. The most economical food is that which is the cheapest and best adapted to the wants of the user. The nutrients of vegetable foods are in general much less costly than animal foods. The animal foods have, however, the advantages of containing larger proportions of protein in more digestible forms. Flour, meal and other staple vegetable foods furnish the nutrients at only a fraction, roughly speaking, a third of their cost in meats, fish, milk, eggs and other ordinary animal foods. At market prices current in the Eastern States, the cost of the most important of nutritive ingredients, the protein, which may be taken as a measure of the relative expensiveness, ranges from 8 to 34 cents per pound in the staple vegetable food, and from 18 cents to somewhat over $1 a pound in the staple animal foods.

"Among the vegetable foods, wheat flour, corn meal and other cereal products are in general the cheapest and most economical. At current rates for instance, the nutrients in wheat flour cost considerably less than in potatoes. Wheat flour at $6 a barrel and potatoes at 40 cents a bushel would furnish nutritive materials at about the same cost. Taking enough of each to furnish the same weight of nutritive material, and supposing the cost of both to be the same, the wheat would probably have the advantage since the protein of the potatoes appears to be inferior in both chemical constitution and in digestibility.

"Among the many ways in which American wastefulness is manifested, one of the worst is in the waste of food, and this wastefulness is practised by the poor as well as the rich. It shows itself in the purchasing of more food than is needed; in using part of the excess to overload the alimentary organs and throwing the rest away; in purchasing food that seems cheap but is really dear; in using costly materials where less expensive ones would serve as well, and in false economy of using too little of one material and too much of another and thus losing oftentimes, in an earnest attempt to save. And not only the loss to the purse from wrong selection of food in the market, but the loss of both money and health by wrong care and cooking and using at home are to be deplored and ought to be avoided.

"Great as is this evil from the financial standpoint, the results that flow from bad physiological economy in the use of food are far more deplorable. Some of our wisest students of physiology and hygiene are pursuaded that improper eating, and especially overeating, is a source of more disease than any one thing; that indeed, what we may call the eating habit does, on the whole, more harm to health than even the drinking habit.

"The rich suffer in health, the great body of people, wage-workers and others in moderate circumstances, suffer in both health and purse, and what is the saddest part of the whole story, the poor suffer most of all from neglect of the fundamental principles of food economy."

In the afternoon Professor Atwater discussed the "Food of Workingmen and its Relations to Work Done," saying in part:

"Statistics of dietaries of considerable numbers of people, mostly of the working classes in this country, show that their food is very large in amount and includes very large proportions of meat and other animal food materials. The smallest quantity of meat per man per day found in any of thirty-seven American dietaries in Massachusetts or Connecticut was two-thirds of a pound, the largest one and two-fifths pounds. As compared with European dietaries, the amounts of total food and of meats are very large indeed. Chemical examinations of the dietaries showed them to be richer in actual nutritive material and in potential energy than even the large quantities would imply, the reason being that they contained so large proportions of meat as well as other nitrogenous and fatty substances, eggs, butter, cheese and milk. The quantities per day of the most valuable of the nutritive ingredients ranged from 95 grains to 254 grains. German standards call for 118 grains in the daily food of a laboring man at moderate work and 145 grains for a laboring man at hard work, while laborers in Massachusetts average just about one-half more than the German standard requires.

"The facts at hand imply that the American workingman turns off much more work than the European. Farm laborers, for instance, have been observed to mow only a little over one-half as much grass in haying-time as workmen in this country. The American workingman is better paid, better housed, better clothed and better fed than the European. He has better opportunities for self-develop-

*Annual Meeting held in this city, beginning August 11, 1887.

ment, more to stimulate his ambition and more hope of reward if his work is efficient. He accomplishes a great deal more. It seems probable that all these factors are connected, but that the explanation of his superior capacity for work is to be found largely in his superior nourishment. What ought to be the panurgy of the American workingman with his great opportunities, his superior intelligence and the 6,776 foot-tons of potential energy in his daily food?"

This address was followed by a short address by Mrs. H. E. Richards, of Boston, who gave a description of the Boston cooking-schools, and said in conclusion:

"What we want is to give a little elementary scientific knowledge that will be of practical benefit to the young. Teach them not alone how to make pie and cake, but the principles which underlie wholesome cookery. Teach them what we mean by combustion of food; how food keeps the body warm, why we need to eat fat, starch and sugar, and how to make palatable dishes out of cheaper cuts of meat and avoid the needless waste in the eating of the food."

When Mrs. Richards had finished, a general discussion of the nutritious elements of corn, beans, beef and potatoes was held, and a number of laughable opinions were expressed regarding the relative value of each.

WHAT THE CHEMISTS TALKED ABOUT.

Section C met in Room No. 23 Hamilton Hall to consider the subject of Chemistry. Professor L. M. Norton, of Boston, read a paper on "The Fatty Acids of the Drying Oils" in which linoleic acid was first discussed, and the probability that it possesses the symbol C^{18} H^{32} O^2 was explained. The auther then showed that the fatty acids of the drying oils are either volatile in vacuo or give volatile products. The properties of the volatile product to be obtained from linoleic acid were given together with the analysis, and a similar series of experiments upon ricinoleic acid was also described. The conclusion was that this method of examining these drying acids will shed much light upon the composition of the drying oils.

Professor Arthur L. Greene, of Purdue University, of Lafayette, Ind., then presented "A Process for the Separation of Alkaloidal Poisons, for Students' Use," which was as follows:

"The material to be examined having been put into an evaporating dish is cut into small pieces. Then add about an equal bulk of alcohol. Make distinctly but not strongly acid with diluted sulphuric acid. Digest on a water bath about thirty minutes. Filter while hot. Digest again about fifteen minutes with about an equal bulk of alcohol. filter while hot. Unite the filtrates. Make just slightly alkaline with a solution of potassium hydrate. Evaporate on a water bath to a syrup. Dissolve in a small amount of water acidulated with sulphuric acid. Filter and wash the residue with a little water. To a small portion of the filtrate apply the tests for alkaloids with the general alkaloidal reagents to see if any alkaloid be present.

"Evaporate the remainder of the solution to about two fluid drams, but not so as to char the residue. Wash several times with commercial benzole. Reject washings. Make just slightly alkaline with a solution of potassium hydrate. Evaporate to a syrup. After again being sure it is alkaline, wash about twice with redistilled benzole. Unite washings. Save residue and call it residue A. Evaporate washings to dryness in several watch glasses. Test these residues for strychnine, brucine, narcotine and atropine.

"Render residue A slightly acid with diluted sulphuric acid. Wash several times with amyl alcohol. Reject washings. Make slightly alkaline with a solution of potassium hydrate. Evaporate to a syrup. After again being sure it is alkaline, wash with amyl alcohol once or twice. Evaporate washings to dryness in watch glasses. Test these residues for morphine."

The other addresses and papers of the morning were: "On the Constituents of Wild Cherry Bark," by Dr. Frederick B. Power and Dr. Henry Weimar; "The Chemical Composition of the Juices of Sorghum Cane in Relation to the Production of Sugar," by Professor H. W. Wiley, of Washington; "On the Occurrence in Nature of a Copper Antimonide," "A New Apparatus for Fractional Distillation," and "Certain Alloys of Kalium and Zinc," by Dr. T. H. Norton, of Cincinnati; "Amount of moisture Left in a Gas After Drying with Phosphorus Pentoxide," by Professor Edward W. Morley, of Cleveland.

The afternoon was occupied by the reading of the following papers: "The Percentage of Ash in Human Bones of Different Ages," by Professor W. P. Mason; "Causes, Progress and Cure of Recent Great Outburst of Typhoid Fever at Mount Holly, N. J.," by Professor Albert N. Leeds, of Hoboken, and "Some Higher Homologues of Cocaine," by Dr. F. G. Novy, of Philadelphia.

"REPORT OF THE COMMITTEE ON UNIFORM METHOD OF STATING THE RESULTS OF ANALYSIS OF MINERAL AND POTABLE WATERS."

The commitee recommended the adoption of two schemes as follows:

"First, a scheme for a mineral water— (a) That the composition be exposed in parts per thousand, in weight. (b) that the parts per thousand of each basic element 'K, Na, Li, Ca, Mg Fe' (Fe_2) vi, etc., be given and of each acidic element, such as Cl, T, S, etc., that is combined directly with a basic element, or that may reasonably be supposed to be so combined—the rest of the acidic elements to be given in connection with all the oxygen of their salts as usually written in our present empirical formulas, as SO_4, CO_4. PO_3, etc. (c) That the volume of OCO_2 and H_2S expelled in boiling be given in cubic centimetres per litre of water. (e) That the combinations deemed most appropriate by the chemist making the analysis be stated by names and by symbols. Scheme for potable water as examined for sanitary purposes. The composition shall be expressed in parts per million (milligrammes per litre) as in the following scheme: Total solids; chlorine; nitrogen expelled on boiling with Na_2 Co_3, equals 'free ammonia' —expelled on boiling with alkaline per manganate equals 'albuminoide ammonia' as nitrite—organic matter (in terms of milligrams of oxygen, consumed by one million of water) —Hardness. The manner of expressing the results on organic matter must depend somewhat upon the method of its estimation; your committee had this matter under discussion, but concluding that it was beyond their province to offer any recommendations as to methods, they recommend provisionally, the above statement as to the organic substance and content themselves with suggesing that the whole matter of methods and details of the examination of water for sanitary purposes be referred to a new committee, to report next year."

Professor W. H. Herrick read a paper on "Improvement in Stand for Electrolysis" which was followed by one by

Professor W. O. Atwater, of Middletown, Conn., on "The Determination of Nitrogen by Soda-lime." This paper was followed by one entitled: "A note on the Chemistry of Germination," by Professor William McMurtrie, of the the University of Illinois. The other papers of the morning were: "Standardizing Hydrometres," by Professor F. G. Novy, of the University of Michigan; "Note on Absorption of Nitrogenous Nutriment by the Roots of Plants," by Professor McMurtrie.

Professor James, of the University of Pennsylvania, read an able paper on the "Manual Training in the Public Schools from an Economical Point of View," in which he said:

"The general introduction into our public schools of systematic training in the underlying principles of the handicrafts is the next great step in the development of our educational system. The adoption of this feature into our public education is demanded alike in the interest of sound intellectual training and by the economic condition of the country.

"The furnishing of facilities in connection with our public schools for manual training will accomplish four highly desirable results. It will give symmetry to a system which at present is notoriously one-sided and defective. The schools cannot be defended from the charge that their effort is chiefly devoted to training one side of the child—one set of its activities—to the exclusion of the others. Suppose the pupil who is graduated from our system of public schools must begin to earn his living on the day after graduation. What can he undertake? There a number of vocations open to him, nearly all of which imply an existence of genteel poverty. He may enter a store as a clerk or bookkeeper, or an office as a copyist, or any one of a limited number of occupations in which an ability to write a fair hand and add a column of figures is the only neccessary quality. In other words, our public schools are in a sense professional schools for these particular callings, and the result is that these callings are always overcrowded. The condition of things is much the same as if everybody went through a law-school for the sake of a so-called liberal education. A system of manual training in the schools would open up to those who go through them the whole range of handicrafts as well as clerkships.

"Again, these industrial features, if introduced would result in better attendance at the public schools. The percentage of children enrolled now, with all our expenditure of money, is less than it should be, and the attendance is often irregular. There is a reason for this. Take the case of the average laborer, with $1,50 to $2.00 a day, who has a boy of ten years. The youngster has learned how to read, write and cipher in a way in his three years of schooling. The question is now shall he continue in school or go into the shop? His going to school means to his father, mother and brothers and sisters a serious sacrifice. They must eat less, wear less and enjoy less for his sake. Why should he go to school at all? If he goes into the shop he will begin to earn a trifle and to learn a trade. In three or four years he will be self-supporting. In school he may learn a little more reading, writing and ciphering, and some geography, but he will come out as far as making his living is concerned, just where he started. But experience has shown that such general manual training as can be given in connection with a school course to boys from ten to fourteen will put them forward as far as they could have proceeded if they had gone directly into the shops. The parent can see this, and there is little doubt that there would be a lengthening of the school life of the great mass of children considerably—with great benefit to them and to the community.

"This manual school-training will tend to remove the stigma from manual labor, which in the minds of many still attaches to it. The fact is that the average boy or girl who remains in the public schools until the completion of the course is lost to manual callings, and many an excellent carpenter or machinist is thus ruined to make an indifferent bookkeeper or even lawyer or clergyman. Pupils now are never brought to associate intelligence and culture with manual labor. They are accustomed to connect the higher goods of life with the so-called genteel occupations. Let them feel that in carpentering or plumbing or moulding there is a field for intellectual qualities, for ingenuity and knowledge, and a perfect revolution will be effected in their attitude towards these things. Yoke intelligence and reflection to the homely cart of manual labor, and the interest of intelligent and reflecting boys will be arrested and permanently fixed.

"Along this line, too, we must look for gradual elevation in the social tone of our workmen. The social standing of any calling in a Republic must depend on the relative rank in intelligence and education. The truth of this fact may be seen in the history of dentistry. A hundred years ago the dentist was the village barber or blacksmith, and had no social standing at all. Now he ranks with the best, and simply because the dentist of to-day is an educated and skilled professionalist. We must so alter the tone of our laboring men that when one of them wants to rise in the social scale he shall seek to do so, not by becoming a lawyer or doctor, but an educated and skilled workman. Then the stigma that attaches to manual labor will be gone. And toward this end nothing will contribute so much as the giving of a liberal education in connection with the mastery of the underlying principles and skillfulness of handicrafts.

"Manual training will do still another thing for us. It will assist powerfully in developing intellectual and industrial ability, which now lies dormant in thousands of our children. We have spent enormous sums of money in the development of our material resources. Yet the real source of our strength lies in the brain and thought of our people, and not in mines and fields. If we develop the former they will in turn develop the latter.

"A general system of education should aim at exciting and training all the different powers and faculties of the pupils. It does not even approximately accomplish this at the present time. An Edison, a Roebling, a Whitney, a Morse might go through the whole curriculum of some of our best schools and find absolutely nothing to awaken him, to stir his powers. He might—and probably would—be ranked as a hopeless dullard. These men were in a sense accidents of the present system. The chances of arousing and drawing out men like them will be enormously increased by adding systematic training in the fundamental operations of the handicrafts.

"The future of our public educational system is, I believe, firmly bound up in and dependent upon the future of manual training. As the latter succeeds the former will flourish."

Professor James gave some account at the end of the progress of manual training in the Philadelphia schools, where it is now being taken up widely. Professor Atwater made a few remarks on the benefits of manual training to the scientific student, and said he always rated the lack of it in his students as a serious handicap.

XUM

TRANSLATIONS, GLEANINGS, ETC.

Strange Medicines.—Quickly—by far too quickly, for the sake of the student and the archæologist (writes Mr. C. F. Gordon Cumming in the *Nineteenth Century*) is the wave of foreign influence over-sweeping Japan, ruthlessly effacing all the most marked characteristics of native manners and customs, and substituting the commonplaces of every-day European life.

Already this tendency to exalt and to adopt foreign novelties meets the traveller at every turn, and only he who turns aside from the tracks most subject to foreign influence can hope now and then to find some staunch conservative, who in that nation of ultra-radicals (albeit most loyal imperialists) has the courage to adhere to his own old-fashioned ways.

I had the good fortune to meet with such a one in the very interesting old city of Osaka—a compounder of just such strange medicines as were administered to our British ancestors in the Middle Ages. So rapidly has the scientific study of medicine been taken up by the Japanese medical practitioners, that the survival of such a chemist of the pure and unadulterated Old School is quite remarkable, and I was greatly struck by the evident annoyance of a Japanese gentleman to whom I expressed my interest in this mediæval chemist, and who evidently felt it humiliating that a foreigner should have seen such a relic of the days of ignorance.

The quaint old man whose loyal adherence to the customs of his ancestors afforded me such an interesting illustration both of old Japan and old Britian was a seller of *Curoyakie*, i. e., carbonized animals reduced to charcoal, and potted in small covered jars of earthenware, to be sold as medicine for the sick and suffering. Formerly all these animals were kept alive in the back premises, and customers selected the creature for themselves, and stood by to see it killed and burnt on the spot, so that there could be no deception, and no doubt as to the freshness of their charred medicine. Doubtless some insensible foreign influence may account for the disappearance of the menagerie of waiting victims and their cremation-ground; now the zoölogical back yard has vanished, and only the strange chemist's shop remains, like a well-stored museum, wherein are ranged portions of the dried carcases of dogs and deer, foxes and badgers, rats and mice, toads and frogs, tigers and elephants.

The rarer the animal and the farther it has travelled, the more precious apparently are its virtues. From the roof hung festoons of gigantic snake-skins, which certainly were foreign importations from some land where pythons flourish, Japan being happily exempt from the presence of such beautiful monsters. I saw one very fine piece of a skin which, though badly dried and much shrunken, measured twenty-six inches across, but it was only a fragment ten feet in length, and was being gradually consumed inch by inch, to lend mystic virtue to compounds of many strange ingredients. I was told that the perfect skin must have measured very nearly fifty feet in length. I saw another fragment twenty-two feet long and twelve inches wide; this also had evidently shrunk considerable in drying, and must, when in life, have been a very fine specimen.

There were also some very fine deer's horns (hartshorn in its pure and simple form), a highly valued Rhinoceros horn, and ivory of various animals. The horns of the Rhinoceros and the unicorn (which seems generally to mean the narwhal) have ever been held in high repute throughout the east as an antidote to poison on cups carved from these horns were used as a safeguard because they possessed the property of neutralizing poison, or at least of revealing its presence.

And indeed the same virtue was attributed to it by the learned leeches of Europe. At the close of the sixteenth century the doctors of medicine in Augsburg met in solemn conclave to examine a specimen of unicorn's horn, which they found to be true monoceros, and not a forgery; the proof thereof being that they administered some of it to a dog which had been poisoned with arsenic, and which recovered after swallowing the antidote. They further administered *nux vomica* to two dogs, and to one they gave twelve grains of unicorn horn, which effectually counteracted the poison; but the other poor dog got none, so he died. Similar statements concerning this antidote, and also concerning the value of elks' and deers' horns powdered as a cure for epilepsy, appear in various old English medical works of the highest authority.

Very remarkable also is the efficacy supposed to attach to antediluvian ivory, more especially the tusks of the mammoths, which have been so well preserved in Siberian ice, that their very flesh is still sometimes found untainted. Here, in these marvellous ice-fields, lie inexhaustible stores of finest ivory, and this it is which the learned professors of the celestial medical hall value so highly. So these precious tusks are dragged forth after thousands of years to be ground down and boiled to a jelly for the cure of vulgar Chinese diseases of the nineteenth century. Alas, poor mammoth!

Nor are these the only antediluvian relics which are thus turned to account. Professor H. N. Moseley tells us of the "dragon's teeth and bones" which he bought from the druggists of Canton, where they are sold by weight as a regular medicine, and are highly prized in the materia medica both of China and Japan as specifics in certain diseases. They proved on examination to be the fossil teeth and bones of various extinct mammalia of the tertiary period, including those of the rhinoceros, elephant, horse, mastodon, stag, hippotherium, and the teeth of another carnivorous animal unknown.

From his examination of these so-called relics of the dragon (which prove to belong to so many different animals, which in successive ages have crept to the same cave to die), Mr. Moseley points out how some imaginative person probably first devised a fanciful picture of the mythical animal, combining the body of the vast lizard with the wings of a bat, the head of a stag, and carnivorous teeth, which has become the stereotyped idea of the dragon in all land. Even in Europe fossil bones thus found together in caves were long known as dragon's bones, and accounted useful in medicine.

The Chinese are firm believers in the efficacy of medicines compounded of the eyes and vitals of the human body. I am not certain whether the Lamas of Peking have there introduced the fashion of administering medicine from a drinking-cup fashioned from the upper part of a wise man's skull; but such medicine-cups are greatly esteemed in Thibet, where they are mounted in gold, silver, or copper.

Such details as these are apt to sound to us strangely unreal as we read them somewhat in the light of travellers' tales, with reference to far-away lands; but it certainly is startling when, for the first time, we realized how

exactly descriptive they are of the medicine lore of our own ancestors—in truth, to this day we may find among ourselves some survivals of the old superstition still lingering in out-of-the-way corners. Thus it is only a few years since the skull of a suicide was used in Caithness as a drinking-cup for the cure of epilepsy. Dr. Arthur Mitchell knows of a case in which the body of such a one was disinterred in order to obtain her skull for this purpose.

It was, however, accounted a more sure specific for epilepsy to reduce part of the skull to a powder and swallow it. Even the moss which grew on such skulls was deemed a certain cure for various diseases. Nor was this simply a popular superstition. In the official pharmacopœia of the college of physicians of London, A. D., 1678, *the skull of a man who has died a violent death*, and the horn of a unicorn, appear as highly approved medicines. Again in 1724, the same pharmacopœia mentions unicorn's horns, human fat, and *human skulls*, dog's dung, toads, vipers, and worms, among the really valuable medical stores. The pharmacopeia was revised in 1742, and various ingredients were rejected, but centipedes, vipers, and lizards were retained.

But we find, in studying this remarkable phase of cannibalism in Europe, that just as the Chinese doctor sets most store by the animals imported from foreign lands, so did our ancestors chiefly prize a preparation of long deceased Egyptians, which had been embalmed with costly salves and balsams, and smelt strongly of myrrh, aloes, and other fragrant things. These medicinal mummies were also imported from Teneriffe, where in olden days the natives used to embalm their dead, sew them in buckskin shrouds, and hide them in caves, whence they were stolen by traders. White mummies were also obtained from the coast of Africa, where bodies of drowned mariners were sometimes washed ashore, and became dried up and shrivelled as they lay unburied on the burning sands. These became so light as scarcely to weigh thirty pounds. They were, however, not considered so desirable as the genuine article from Alexandria, and were moreover more expensive.

The learned doctors of France, Germany and Italy all made great use of this eccentric drug, and in the seventeenth century grievous complaints arose of its adulteration. Monsieur Pomet, chief apothecary to the French king, records that the king's physician went to Alexandria to judge for himself on this matter, and having made friends with a Jewish dealer in mummies, was admitted to his storehouse, where he saw piles of bodies. He asked what kind of bodies were used, and how they were prepared. The Jew informed him that "he took such bodies as he could get, whether they died of some disease or of some contagion; he embalmed them with the sweepings of various old drugs, myrrh, aloes, pitch and gums, wound them about with a cere-cloth, and then dried them in an oven, after which he sent them to Europe, and marvelled to see the Christians were lovers of such filthiness."

Abdallatif, a traveller of the twelfth century, records how one of his friends found in the tombs at Ghizeh a jar carefully sealed, which he opened and found to contain such excellent honey that he could not resist eating a good deal of it, and was only checked in his feast by drawing out a hair, whereon he investigated further, and found the body of an ancient Egyptain baby in good condition, and adorned with jewels. He does not record how he enjoyed that meal in retrospect. Imagine dining off the honeyed essence of a baby Pharaoh!

A very interesting point of similiarity between the little shop of the old Japanese apothecary and those of early English druggists is suggested by the extensive use of calcined animal matter recommended in the prescriptions which were most highly valued in England before the Norman conquest, and which are recorded in elaborate Saxon manuscripts, carefully preserved in our national archives. The "leechdoms" are written in ancient black-letter characters, and are curiously illustrated with pictures of the herbs and animals which are recommeded for medicinal use.

To us, who pride ourselves on the medical skill of the present day, it is truly marvellous to find that the early part of the eighteenth century should show so little, if any, advance on the ignorance which prevailed at the date of the Norman conquest. Here is a rare old volume which was printed in the Cowgate of Edinburgh in 1712. It is "A Collection of useful Remedies for most Distempers. Collected by John Moncrief, the laird of Tippermelluch, a person of extraordinary skill and knowledge in the art of physick, and who reformed many stupendous cures by these simple remedies."

His volume contains innumerable directions for the preparation of divers herbs, and also a multitude of prescriptions of animal substances so inexpressibly loathsome as to make it a matter of marvel how any one could be found either to prepare them, or to submit to their application. Salts of ammonia in the crudest form were a favorite remedy for external or internal use.

By far the least objectionable compounds were those prepared from carbonized animals in the Japanese or early Saxon manner. Thus "for a dangerous squinance or quinsy" Tippermalluch bids his disciples take old swallows, and burn them in a pot, take the powder thereof and mix it with honey and anoint the throat therewith. A plaister of a swallow's nest dissolves humors of the gorge and chouks. Ashes of worms applied with honey draws out little broken bones.

I think that the Japanese gentleman who was so much annoyed at my having obtained a glimpse of the "foolishness" of old Japanese pharmacy, might have wondered a good deal had he got hold of some English prescription of the last century. I am sure that should these pages ever met his eye, he will acknowledge that my interest in the medicine lore of his ancestors was certainly justifiable.

Waterproof Garments.—To make a garment waterproof dip it in a bucket of water in which has been dissolved a half pound of sugar of lead and a half pound of alum, and let it remain twenty-four hours; then remove and hang up to dry without wringing. The garment is rendered thoroughly impervious to water and the fabric not in the least injured.

Diabetes.—Virgier recommends the following pill as more convenient than Martineau's arsenical liquid containing lithium, and just as effectual. Lithium carbonas one grain and a half, sodii arsenias one twenty-fifth of a grain, extract of gentian three-fourths of a grain. A pill is to be taken morning and night, and continued until sugar has disappeared from the urine.

MISCELLANY.

—The Brooklyn Hom. Hospital is in need of a house surgeon and an ambulance surgeon immediately. The salary for each is $200 a year and board. Those wishing the positions should apply to Dr. J. F. Atwood, 307 Cumberland street, Brooklyn, N. Y.

—The Massachusetts Homœopathic Hospital has received a donation of $5000 from the estate of George E. Downes, of Canton, Mass.

—Dr. Strong, chief of staff W. I. Hospital, reports 707 patients treated during the month of August, mortality 3.11 per cent.; 2660 patients have been treated since January 1st. There will be three (3) vacancies on the house staff on November 1st,

—Dr. E. S. Breyfogle announces the removal of his office to 209 Geary street, San Francisco.

—An increase of local temperature over the spleen has been found by Dr. Montefusco, of Naples, in Variola. This local increase is about 1°c. higher than the cutaneous temperature elsewhere, and varies with the course of the fever.

—Statistics show that while the population is increasing annually at the rate of less than two per cent, the annual increase of physicians is five and a half per cent., a condition which cannot exist without change through many centuries without one inevitable conclusion—a population composed entirely of physicians.

—Dr. E. Hasbrouck in his paper on "Obstetrical Memoranda and Experiences," mentions the Indian method of resuscitation of still-born infants, introduced to the profession by Dr. Meisner, of Chicago. It consists in placing an apparently dead infant upon a warm woolen blanket, and removing it as far from the body of the mother as the unsevered umbilical cord will permit. The mother is then requested to take a few deep inspirations. It is claimed that with every such inspiration the child will open its mouth, gasp and soon begin to breathe.

—According to A. A. Breneman, S. B., in the *Journal of the American Chemical Society*, vol. viii, No. 1, the most striking circumstance revealed by an analysis of the water of some of our principal cities is the great comparative purity of the Brooklyn water. Next to this in order of purity stand Chicago and Milwaukee, and then come Washington, Boston, San Francsico, Albany, New York, St. Louis and Pittsburgh. The water of Philadelphia was not considered in the list, because of the exceptional conditions under which the sample was collected.

—At a recent meeting of the Dresden agricultural society a local pharmacist reported that, in the neighborhood where the deadly night-shade grew abundantly, the bees had incorporated with the honey sufficient poison from these flowers to account for numerous and occasionally fatal cases of poisoning.

—A Vienna correspondent states that he has seen a professor deliberately rupture a perineum during parturition in order to give a student an opportunity of sewing it up!

—A London physician who for six months tested Dr. Jaeger's plan of wearing nothing but wool, day or night, says the result has been a complete immunity from colds and a marked increase in capacity for work. Instead of alternate feelings of heat and cold there has been a uniform and most agreeable glow of warmth.

—Dr. E. O. Shakespeare, who was sent by our Government to investigate the subject of cholera, says that Koch has conferred upon humanity a benefit of incalculable value by enabling us to determine at once the positive diagnosis.

—It is said that Rome has a more bountiful supply of water than any other city in Europe, there being 591 litres in the twenty-four hours for each inhabitant. Next comes London with 300 litres for each inhabitant. Paris comes third, with 227 litres; then Naples, 200; then Berlin, with 140; Vienna, with 100, and seventh, Turin, with 98.

—"The philosopher should be a man willing to listen to every suggestion, but determined to judge for himself. He should not be biased by appearances. Have no favorite hypothesis. Be of no school, and in doctrine have no master. He should not be a respecter of persons, but of things. Truth should be his primary object. If to these qualities be added industry, he may, indeed, hope to walk within the veil of the temple of nature." After quoting this excellent sentiment from the *Life of Faraday*, by Bence Jones, the *American Homœopathist* very coolly asks if there is "a better description extant of what the physician should be!"

—A healthful place for white people is Tennessee, the mortality-rate being only 13.44 per 1,000 annually.

—A bacteriological laboratory is to be established in Irkutsk, the capital of Eastern Siberia, a city of 40,000 people.

—A new antiseptic is being used in the wards of Jefferson college hospital. This is trichlorphenol, which is of Russian introduction, and has been favorably mentioned by one of the most prominent therapeutists. Trichlorphenol is extemporaneously prepared by mixing one part of a four-per-cent. solution of carbolic acid with five parts of a saturated solution of chlorinated lime; the filtrate is said to be twenty-five times more powerful than carbolic acid.

—Paraffin, with a melting point of 130°, is recommended by a writer in the *Provincial Med. Jour.* as a substitute for plaster of Paris in surgical dressings. It does not absorb purulent matter like the latter; is lighter, easily managed, and is equally serviceable for splints or spinal jackets.

—Professor Alonzo Clark, for fifty years a teacher of medicine, died Sept. 13th, in the eighty-first year of his age. Prof. Clark had been aphasic for some years. Dr. Clark contributed nothing to medical literature except occasional papers and reports of some of his lectures, but the opium treatment of peritonitis is said to have been introduced by him.

—Dr. Richard Quain, editor of "Quain's Dictionary of Medicine," died recently in London, at the age of seventy-one.

—M. Galippe has related to the Paris Academy of Medicine the discovery of a new fungus composed of tubes and spores of mycelium developed in the human saliva. It belongs to the moniliæ family, and M. Galippe has given it the name of *monilia sputicola*.

—A man in Bathgate was present at the funeral of a neighbor of whom no good could be said, but as everybody was saying something, and as he did not like to appear singular, and was incapable of a lying eulogy, he remarked that it was a "nice, quiet corpse."